IONOSPHERIC DATA

ISSUED

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PREPARED BY INTERSERVICE RADIO PROPAGATION LABORATORY
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TERMINOLOGY AND SCALING PRACTICES

The symbols and terminology used in this report are those adopted by the International Radio Propagation Conference, and given in detail on pages 24 to 26 of the report IRPL-C61, "Report of International Radio Propagation Conference," and in the Section on "Terminology", in reports IRPL-F1, 2, 3, 4, 5.

Beginning with data reported for September, a new symbol, L, defined as follows, is adopted for use in detailed tabulations of hourly values of ionosphere characteristics observed at Washington:

> L or 1 = critical frequency, muf, or muf factor for F1 layer omitted because no definite and abrupt change in slope of the h'f curve occurs either for the first reflection or for any of the multiples. (See "Report of International Radio Propagation Conference," IRPL-C61, June 1944, VI 3c, p.37).

In the past, ionospheric conditions were summarized on a monthly basis by using average or mean values, for each hour of the day, for each month. However, following the recommendations of the International Radio Propagation Conference, held in Washington 17 April to 5 May 1944, beginning with data for 1 Jan. 1945, median values were used by IRPL wherever possible. Thus, median values are given for Washington, for all stations reporting directly to the IRPL, for the Canadian stations, and for all others sending in detailed tabulations to the IRPL, from which medians can be computed.

Where averages are reported, they are, at any hour, the average for all the days during the month for which numerical data existed.

The monthly median values used here are the values equalled or exceeded on half the days of the month at the given hour. The following conventions are used in determining the medians for hours when no measured values are given, because of equipment limitations and ionospheric irregularities. Symbols used are those given in the report referred to above, IRPL-C61.

a. For all ionospheric characteristics:
   Values missing because of A, B, C or F (see terminology referred to above) are omitted from the median count.

b. For critical frequencies and virtual heights:
   Values missing because of E are counted as equal to or less than the lower limit of the recorder.
   Values missing because of D are counted as equal to or greater than the upper limit of the recorder.
   Values missing because of G are counted:
   1. For $f^{o}F2$, as equal to or less than $f^{o}F1$.
   2. For h'F2, as equal to or greater than the median.
   Values missing for any other reason are omitted from the median count.

c. For muf factors (M-factors):
   Values missing because of G are counted as equal to or less than the median.
   Values missing for any other reason are omitted from the median count.

d. For sporadic E (Es):

Values of fEs missing because no Es reflections appeared, the equipment functioning normally otherwise, are counted as equal to or less than the lower limit of the recorder.

Values of fEs missing for any other reason, and values of hEs missing for any reason at all, are omitted from the median count.

MONTHLY AVERAGES AND MEDIAN VALUES OF IONOSPHERIC DATA

The ionospheric data given here in graphical and tabular form were assembled by the Interservice Radio Propagation Laboratory for analysis and correlation, incidental to IRPL predictions of radio propagation conditions. The following are the sources of the data:

Australian Council for Scientific and Industrial Research, Radio Research Board, Australia:
- Brisbane, Q., Australia
- Mt. Stromlo, Canberra, NSW, Australia
- Cape York, Q., Australia

British National Physical Laboratory, and Inter-Services Ionosphere Bureau:
- Slough, England
- Great Baddow, England
- Burghead, Scotland
- Delhi, India
- Madras, India
- Simonstown, Union of S. Africa
- Colombo, Ceylon

Canadian Radio Wave Propagation Committee:
- Churchill, Canada
- Ottawa, Canada
- St. John's, Newfoundland
- Prince Rupert, Canada

New Zealand Radio Research Committee:
- Kermadec Is.
- Christchurch (Canterbury University College Observatory)
- Campbell I.
- Pitcairn I.
- Rarotonga I.

Interdepartment Ionosphere Bureau, U.S.S.R. Scientific Experimental Institute of Terrestrial Magnetism, Moscow, U.S.S.R.:
- Tykhi Bay, U.S.S.R.
- Tomsk, U.S.S.R.
- Sverdlovsk, U.S.S.R.
- Moscow, U.S.S.R.
- Leningrad, U.S.S.R.
- Alma Ata, U.S.S.R.

Carnegie Institution of Washington (Department of Terrestrial Magnetism):
Baffin I., Canada
Christmas I.
Fairbanks, Alaska (University of Alaska, College, Alaska)
Reykjavik, Iceland
Maui, Hawaii
Trinidad, Brit. West Indies
Huancayo, Peru
Watheroo, W. Australia.

United States Army Signal Corps:
Leyte, Philippine Is.

National Bureau of Standards:
Washington, D.C.

Stanford University:
San Francisco, California

Louisiana State University:
Baton Rouge, Louisiana

University of Puerto Rico:
San Juan, P.R.

Harvard University:
Boston, Mass.

The tables of "provisional data" give values as reported to the IRPL by telephone or telegraph. Any errors in these values will be corrected in later issues of the F-series reports. In final data tabulations, any omission of values previously given in provisional tabulations is indicated by a dash.

The tables and graphs of "final data" are correct for the values reported to the IRPL, but, because of variations in practice in the interpretation of records and scaling and manner of reporting of values, may at times give an erroneous conception of typical ionospheric characteristics at the station. Some of these errors are due to:

a. Differences in scaling records where spread echoes are present.

b. Omission of values where $f^{o}F2$ is less than or equal to $f^{o}F1$, leading to erroneously high values of monthly average or median values.

c. Omission of values where critical frequencies are less than the lower frequency limit of the recorder, also leading to erroneously high values of monthly average or median values.

These effects were discussed on pages 6 and 7 of the previous F-series reports, IRPL-F1, 2, 3, 4, and 5. Discrepancies between predicted and observed values are often ascribable to these effects.

IONOSPHERIC DATA FOR EVERY DAY AND HOUR

These data, observed at Washington, D.C., follow the scaling practices given in the report IRPL-C61, "Report of International Radio Propagation Conference," pages 36 to 39, and the median values are determined by the conventions given under "Terminology and Scaling Practices" above. Note that the table of values of F2-M3500 is no longer included, since these values can be readily derived from the values of F2-M3000.

IONOSPHERE DISTURBANCES

Table 82 presents ionosphere character figures for Washington, D.C., during September 1945, as determined by the criteria presented in the report IRPL-R5, "Criteria for Ionospheric Storminess", together with American magnetic K-figures which are usually covariant with them.

Table 83 presents sudden ionosphere disturbances as observed at Washington, D.C., during September 1945.

Table 84 gives provisional radio propagation quality figures for North Atlantic and North Pacific areas, for 01 to 12 and 13 to 24 GCT, August 1945, compared with the IRPL daily radio disturbance warnings, and ISIB daily warnings, the IRPL semiweekly radio propagation forecasts for the A-zone, and the half-day American geomagnetic K-figures.

The radio propagation quality figures were prepared from radio traffic data, reported to IRPL, in the manner described in detail in report IRPL-R13, "Ionospheric and Radio Propagation Disturbances, October 1943 through February 1945," issued 24 May 1945.

ADDITIONAL IONOSPHERIC DATA FOR SOLAR ECLIPSE, 9 JULY, 1945

In the previous issue of this report, IRPL-F13, issued September 1945, a preliminary account of eclipse data received by IRPL was presented. The major part of the data, particularly from locations where the eclipse effects were most pronounced, are still being analyzed, and have not yet been received at this laboratory. Some additional information concerning the effects of the eclipse has been received, however, and is presented herewith.

Possibly the most interesting effect investigated is that of the corpuscular eclipse. E. A. Milne (M.N. Roy. Ast. Soc. 86, 459, 578, 1926) has shown that neutral particles may be emitted by the sun because of radiation pressure acting upon atoms in the chromosphere. There seems very good reason to believe (Cf. IRPL-F12, p.8, "Sporadic-E Variation with Intensity and Latitude of Solar Activity") that sporadic-E ionization is caused by solar corpuscular radiation, not necessarily neutral, however. The eclipse of 9 July 1945 presented an excellent opportunity to determine the effect of lunar shielding from such emitted corpuscles, inasmuch as such corpuscular emission arriving at the earth should be near maximum in the earth's northern hemisphere in midsummer, near the minimum period of the solar-activity cycle.

Calculations by E. A. Milne (loc. cit.), S.R. Pike (M.N. Roy. Ast. Soc. 88, 3, 1927), and S. Chapman (M.N. Roy. Ast. Soc. 89, 458, 1929; 92, 413, 1931-2) predict the solar emission of a stream of neutral particles, with a limiting velocity of about 1600 km/s attained after they had traveled about ten solar radii distant from the sun, nearly 90% of which have velocities inclined less than 10° to a radial direction. The earth thus intercepts a very nearly parallel beam of these particles, emitted by an area subtending an angle of about 15° near the center of the solar disc, or having about one quarter the apparent diameter of the disc.

As shown by S. Chapman (M.N. Roy. Ast. Soc. 92, 413, 1931-2), the cone of lunar shielding for such particles, at the earth, during a solar eclipse, has, therefore, a normal sectional diameter of about 1600 miles, with a penumbra of about 500 miles width, the latter about a fourth as much as the optical penumbra.

Since the particles are emitted approximately radially from the sun, the ratio of this radial velocity to the transverse velocity with respect to the moon (the moon's velocity) gives a backward slope of about 1° for the shadow cone, or about a 4300-mile lag at the distance of the earth's orbit. The moon's velocity being nearly parallel to that of the earth, but about 35 mi/min slower, the corpuscular eclipse thus occurs about two hours before the optical eclipse. If one assumes a 2600-mile normal sectional diameter, as above, for the corpuscular shadow cone, the duration of eclipse is about $1\frac{1}{4}$ hours for a transverse plane through the center of the earth. Because of the earth's rotation, the actual time of passage and occurrence before the optical eclipse will vary, as shown in the tables below, computed by the U.S. Naval Observatory, for three assumed corpuscular velocities of 1000, 2000, and 3000 km/s at a height of 100 km (approximately Es-layer height) above the earth's surface.

Total Solar Eclipse 9 July 1945

Middle of Tracks of Corpuscular Eclipses
for Earth's Surface and Height of 100 km.
(Corpuscular Velocities 1000, 2000, 3000 km/s).
Also Central Line of Visual Eclipse at Surface and 100 km.

(Data prepared by U.S.Naval Observatory)

Visual Eclipse					Corpuscular Eclipse 1000 km/s				
	Surface		100 km			Surface		100 km	
GCT	Latitude	Longitude	Latitude	Longitude	GCT	Latitude	Longitude	Latitude	Longitude
h m					h m				
Beg.12 13.8	+44°23'	+115°57'	-	-	Beg. 8 56.5	+32°52'	+60°17'	+37° 0'	+49° 4'
12 25	+48 13	+107 44	+50°17'	+100°21'	9 0	+39 1	+46 47	+40 2	+42 37
12 30	+58 57	+ 84 38	+58 59	+ 81 5	9 30	+51 43	+16 59	+51 27	+15 21
13 0	+68 3	+ 51 45	+67 18	+ 49 42	10 0	+56 49	- 5 8	+56 16	- 5 53
13 30	+69 51	+ 13 50	+68 54	+ 14 16	10 24.5	+57 54	-23 8	+57 17	-23 8
14 0	+64 52	-19 58	+64 17	-17 40	11 0	+54 55	-48 55	+54 26	-47 52
14 30	+53 23	-48 49	+53 43	-45 7	11 30	+47 50	-70 28	+47 44	-68 34
14 40	+44 52	-65 46	+47 7	-58 10	11 45	+41 33	-84 7	+41 58	-81 17
	Corpuscular Eclipse 2000 km/s					Corpuscular Eclipse 3000 km/s			
Beg.10 33.7	+ 38 24	+ 87 15	+42 36	+75 9	Beg.11 6.6	+40 12	+96 26	+44 37	+84 9
10 45	+49 47	+ 62 17	+50 3	+59 8	11 15	+50 16	+74 53	+50 20	+72 6
11 0	+55 46	+ 47 33	+55 33	+45 16	11 30	+57 3	+58 48	+56 52	+56 12
11 30	+62 9	+ 21 1	+61 30	+19 53	12 0	+64 4	+30 23	+63 23	+29 3
12 0	+63 19	- 6 41	+62 54	- 6 26	12 30	+65 21	+ 0 2	+64 33	+ 0 21
12 30	+59 39	-32 49	+59 6	-31 21	13 0	+61 18	-28 9	+60 44	-26 28
13 0	+50 55	-57 28	+50 56	-54 56	13 30	+51 46	-54 11	+51 51	-51 20
					13 40	+49 25	-57 31	+49 43	-54 20

From these considerations, one might expect lower sporadic-E ionization for a period of time about two hours or so before lowered ionization occurs in the regular ionospheric layers, if sporadic-E ionization were principally caused by neutral corpuscles.

Figs. 55 through 58 present values of fEs for 9 July, in comparison with those for control days before and after the day of eclipse, at Boston, Massachusetts; San Francisco, California; Baton Rouge, Louisiana; and San Juan, Puerto Rico. It may be seen that the large daily variability of fEs is sufficient to obscure any but very pronounced corpuscular eclipse effects, which, since these stations were not in the path of totality, might not be expected to be great. However, not only at these stations, but also at all other stations for which eclipse observations were made, there was no conclusive evidence of neutral corpuscular eclipse effects. Since other considerations (Cf. IRPL-F12, p.8, "Sporadic-E Variation with Intensity and Latitude of Solar Activity) present good argument for the solar corpuscular origin of sporadic-E ionization, it seems most probable that the preponderance of these corpuscles is electrically charged.

Additional information received from the Canadian stations from which a preliminary report was given in the previous issue of this report, IRPL-F13, shows maximum eclipse effects in the E and F1 layers close to the maximum phase of the optical eclipse, thus confirming the hypothesis of light radiation as their origin. F2-layer effects were more complex, and the determination of the significance of pre-eclipse or lag effects is in process. At St. John's, Newfoundland, and Churchill, Canada, maximum F2-layer effects occurred near the maximum phase of the optical eclipse.

At Churchill, Canada, separation of F1 and F2 layers was observed during the eclipse, with particularly great reduction (46%) of F1-layer ionization density at 1220, near maximum phase of the optical eclipse.

Normal separation of the F1 and F2 layers occurred between 1245 and 1250 on 9 July, and about 1300 on the control days, 8 and 10 July. At Prince Rupert, Canada, where the maximum of the optical eclipse occurred near sunrise, and much longer before normal separation of the F1 and F2 layers, no separation was observed during the eclipse, but a reduction of about 34% occurred in night F2-layer ionization density, - the greatest observed for F2 layer at any station. While evaluation of the significance of these results is still in process, they suggest the possibility of night separation of F1- and F2-layer ionization.

ERRATA

1. Provisional data for June 1945 for all the New Zealand stations, reported in IRPL-F10 as "average values" were actually median values. These stations were: Rarotonga I. (Table 20), Pitcairn I. (Table 21), Kermadec Is. (Table 23), Christchurch, N.Z. (Table 26), Campbell I. (Table 27).

2. A report from New Zealand dated 27 August 1945 stated that, because of equipment difficulties, all values of heights reported for Rarotonga I. for April, May, and June 1945 were erroneous and not amenable to correction. No heights were reported for June, but the height data for May appearing as final data in IRPL-F11, Table 34 and Fig. 26, and the height data for April appearing as final data in IRPL-F10, Table 31 and Fig. 26, should be disregarded.

Table 1 (Provisional Data)

Fairbanks, Alaska (64.9°N, 147.8°W.) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	2.4					3.2	2.6
01	320	2.3					4.0	2.9
02	320	2.2					3.3	2.9
03	320	2.4				2.0	3.6	2.8
04	320	2.6				2.1	3.6	2.8
05	280	3.2				1.3	2.8	3.0
06	260	3.9	240	3.2		1.9	2.7	3.0
07	280	4.5	230	3.5		2.2	3.0	3.0
08	320	4.7	230	3.8		2.4	2.8	3.0
09	320	5.0	220	3.9		2.6	2.9	3.0
10	330	5.2	210	4.0		2.7	3.0	3.0
11	340	5.4	210	4.1		2.8	3.1	3.0
12	320	5.5	220	4.1		2.8	2.9	3.0
13	310	5.5	220	4.0		2.7	2.9	3.1
14	300	5.6	220	3.9		2.6	2.7	3.1
15	270	5.6	220	3.8		2.4	2.2	3.2
16	240	5.5	230	3.2		2.2	2.1	3.2
17	240	5.3	240	3.2		2.0	1.6	3.2
18	250	5.0				1.4	1.8	3.2
19	240	4.0				1.2	2.9	3.1
20	250	3.0				1.3	3.0	3.1
21	260	3.2					3.1	3.1
22	270	2.7				1.1	3.2	3.0
23	280	2.4				1.1	3.2	3.0

Time: 150°W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 2 (Provisional Data)

Churchill, Canada (58.8°N, 94.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.6						2.9
01		3.8						3.0
02		3.7						2.9
03		3.9						2.9
04		3.8						2.8
05		4.1						2.9
06		3.9						3.0
07		4.6						3.1
08		4.9						3.1
09		5.2						3.0
10		5.6						3.0
11		5.6						3.0
12		5.8						3.0
13		6.1						3.0
14		6.0						3.0
15		6.4						3.0
16		6.0						3.0
17		6.2						2.9
18		5.8						2.9
19		4.8						2.9
20		4.4						2.9
21		4.0						2.8
22		3.9						2.8
23		4.4						2.8

Time: 90.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 3 (Provisional Data)

Prince Rupert, Canada (54.3°N, 130.3°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		2.6						3.2
01		2.5						3.0
02		2.3						3.0
03		2.1						3.0
04		2.3						3.0
05		2.8						3.1
06		2.9						3.3
07		4.1						3.4
08		4.7						3.2
09		5.3						3.3
10		5.6						3.3
11		6.1						3.3
12		6.1						3.3
13		6.1						3.2
14		6.1						3.3
15		6.0						3.3
16		5.9						3.4
17		5.8						3.4
18		5.4						3.5
19		5.1						3.5
20		4.6						3.4
21		4.1						3.4
22		3.6						3.3
23		3.4						3.2

Time: 120.0°W.
Length of time sweep: Manual operation.
Median values.

Table 4 (Provisional Data)

St. John's, Newfoundland (47.7°N, 52.7°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.4						3.1
01		3.1						3.1
02		2.9						3.1
03		2.5						3.2
04		2.4						3.2
05		2.3						3.2
06		3.6						3.3
07		4.3						3.5
08		5.5						3.6
09		5.8						3.4
10		6.1						3.5
11		6.3						3.5
12		6.3						3.4
13		6.3						3.4
14		6.3						3.4
15		6.4						3.4
16		6.6						3.3
17		6.5						3.3
18		6.9						3.3
19		6.7						3.3
20		5.9						3.4
21		5.0						3.3
22		4.3						3.2
23		3.8						3.2

Time: 52.5°W.
Length of time sweep: Manual operation.
Median values.

Table 5 (Provisional Data)

Ottawa, Canada (45.5°N, 75.8°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.1						2.8
01		3.0						2.8
02		2.7						2.8
03		2.5						2.8
04		2.6						2.7
05		2.7						2.7
06		3.9						3.1
07		5.0						3.2
08		5.5						3.1
09		5.8						3.1
10		6.0						3.0
11		6.2						3.0
12		6.4						3.0
13		6.4						3.0
14		6.5						3.0
15		6.4						3.0
16		6.6						3.0
17		6.5						3.0
18		6.2						3.0
19		6.4						3.0
20		5.5						3.0
21		4.6						3.0
22		3.9						3.0
23		3.5						2.8

Time: 75.0°W.
Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 6 (Provisional Data)

Boston, Massachusetts (42.4°N, 71.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.0						2.9
01		3.0						2.9
02		2.7						2.9
03		2.3						2.9
04		2.0						2.9
05		2.4						3.0
06		4.2						3.2
07		5.4						3.3
08		5.7						3.3
09		6.3						3.2
10		6.4						3.1
11		6.3						3.1
12		6.8						3.1
13		6.6						3.1
14		6.5						3.1
15		6.6						3.1
16		6.7						3.1
17		6.7						3.1
18		6.6						3.1
19		5.8						3.0
20		5.0						3.0
21		4.3						2.9
22		3.8						2.8
23		3.2						2.8

Time: 75°W.
Median values.

Table 7 (Provisional Data)

San Francisco, Calif. (37.4°N, 122.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.5						3.0
01		3.6						2.9
02		3.5						3.0
03		3.5						2.9
04		3.6						3.0
05		3.7						3.0
06		4.2						3.1
07		5.8						3.4
08		6.5						3.3
09		6.4						3.3
10		6.8						3.2
11		6.8						3.1
12		7.4						3.0
13		7.8						3.1
14		7.8						3.1
15		7.4						3.2
16		7.0						3.3
17		6.6						3.4
18		6.2						3.4
19		5.4						3.3
20		4.2						3.2
21		4.0						3.1
22		3.8						3.0
23		3.6						3.0

Time: 120°W.
Length of time sweep: 0.8 Mc to 12 Mc in six minutes. Record centered on the hour.
Median values.

Table 8 (Provisional Data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.4						2.9
01		3.5						2.9
02		3.4						3.1
03		3.3						3.0
04		3.2						3.0
05		3.2						3.1
06		4.8						3.3
07		6.0						3.3
08		6.3						3.3
09		6.2						3.2
10		6.4						3.1
11		7.0						3.0
12		7.4						3.1
13		7.3						3.1
14		7.5						3.1
15		7.9						3.1
16		7.7						3.1
17		7.5						3.2
18		7.5						3.2
19		5.0						3.2
20		4.0						3.0
21		3.5						2.9
22		3.4						2.9
23		3.3						3.0

Time: 90.0°W.
Length of time sweep: 1.9 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 9 (Provisional Data)

Maui, Hawaii (20.8°N, 156.5°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	250	4.6						3.1
01	220	4.0						3.3
02	220	2.9						3.2
03	250	2.6						3.3
04	220	2.9						3.2
05	250	2.6						3.1
06	260	3.3						3.0
07	240	6.0				2.2		3.3
08	230	6.8	220	4.2		2.9		3.2
09	260	7.1	220	4.6		3.1		3.0
10	320	8.1	220	4.8		3.3		2.8
11	340	9.1	220	4.8		3.5		2.8
12	350	10.1	210	4.9		3.6		2.8
13	340	10.8	210	4.8		3.6		2.9
14	320	11.3	220	4.7		3.5		3.0
15	300	12.2	220	4.6		3.3		3.1
16	270	12.5	230	4.4		3.0	4.2	3.2
17	250	11.8	230	4.0		2.5	3.7	3.3
18	220	10.0	220	3.2			3.4	3.4
19	220	7.6					3.2	3.3
20	210	5.7						3.2
21	240	5.0						2.9
22	280	4.4						2.8
23	280	4.4						2.9

Time: 150.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 10 (Provisional Data)

Trinidad, Brit.West Indies (10.6°N, 61.2°W) September 20 through 30,1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	290	5.4					3.3	3.4
01	280	5.2					5.6	3.2
02	260	4.4					4.2	3.2
03	260	4.0						3.3
04		3.0						3.4
05		2.6						3.0
06	260	4.1					2.9	3.2
07	250	6.4					2.9	3.4
08	280	7.3	220	4.4			3.2	3.3
09	300	7.2	230	4.7			3.5	3.0
10	330	8.7	220	4.8			3.9	2.8
11	320	9.8	220	4.8			4.0	2.9
12	320	11.0	220	4.8			4.6	2.9
13	300	11.8	220	4.8			5.0	3.1
14	290	12.3	220	4.7			5.8	3.1
15	280	11.7	220	4.7			4.8	3.2
16	260	10.4	230	4.3			4.7	3.2
17	250	9.8					4.5	3.2
18	260	9.0					5.3	3.1
19	260	7.8					4.5	3.0
20	260	7.5					4.1	3.2
21	260	6.0					5.0	3.0
22	300	5.4					2.8	2.8
23	320	5.3					4.8	2.8

Time: 60.0°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 11 (Provisional Data)

Christmas I. (1.9°N, 157.3°W) September 1945.

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	230	8.0					2.0	3.2
01	230	8.0					2.0	3.2
02	220	6.6						3.3
03	220	5.6					1.9	3.5
04	220	4.6					2.0	3.5
05	230	3.4					2.2	3.4
06	240	2.9					2.3	3.3
07	240	5.6				2.1	3.5	3.0
08	220	6.9				2.8	6.7	2.8
09	320	7.4	210	4.6		3.2	7.3	2.7
10	340	7.8	200	4.8		3.5	9.5	2.6
11	350	8.0	200	4.9		3.7	9.6	2.5
12	380	8.1	200	4.9		3.8	9.7	2.5
13	360	8.4	200	4.9		3.7	9.5	2.5
14	360	8.6	200	4.9		3.7	9.5	2.6
15	340	9.6	200	4.6		3.5	8.0	2.6
16	310	10.0	210	4.5		3.2	7.1	2.8
17	220	10.3				2.8	6.4	2.8
18	240	10.4				2.0	3.5	2.8
19	270	9.8					3.2	2.7
20	290	8.6						2.7
21	260	8.5						2.6
22	250	8.0						2.9
23	230	8.8					2.0	3.0

Time: 150°W.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 12 (Provisional Data)

Fairbanks, Alaska (64.9°N, 147.8°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	3.0					3.9	2.8
01	290	3.1				1.5	5.2	2.8
02	300	3.2				2.1	5.0	2.8
03	290	3.4				1.4	4.4	2.8
04	280	3.8	260	3.0		1.4	3.3	2.9
05	340	4.0	240	3.2		2.0	3.2	2.8
06	370	4.6	230	3.5		2.3	3.2	2.8
07	410	4.5	220	3.8		2.5	3.2	2.8
08	420	4.7	220	3.9		2.7	3.2	2.8
09	400	4.8	220	4.0		2.7	3.2	2.7
10	420	4.8	210	4.1		2.9	3.2	2.8
11	380	4.9	210	4.1		3.0	3.2	2.8
12	390	5.0	210	4.1		3.0	3.2	2.8
13	410	4.9	220	4.2		2.9	3.2	2.8
14	400	4.8	210	4.1		2.9	3.2	2.8
15	370	4.5	230	4.1		2.8	3.1	2.9
16	330	4.6	230	4.0		2.6	3.0	3.0
17	320	4.9	240	3.8		2.3	3.2	3.0
18	260	4.8	240	3.2		2.0	3.0	3.1
19	260	4.7	240	3.0		1.8	3.0	3.1
20	260	4.6				1.3	3.2	3.0
21	260	4.4				1.2	3.2	3.0
22	260	3.6				1.0	3.4	2.9
23	270	3.4				0.9	4.0	2.9

Time: 150°W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 13 (Provisional Data)

Burghead, Scotland (57.7°N, 3.5°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.4						
01		4.0						
02		3.7						
03		3.6						
04		3.4						
05		4.0						
06		4.3						
07		4.6						
08		4.9						
09		5.3						
10		5.4						
11		5.5						
12		5.5						
13		5.5						
14		5.5						
15		5.5						
16		5.5						
17		5.7						
18		5.6						
19		5.8						
20		5.8						
21		5.6						
22		5.2						
23		4.8						

Time: 0°
Average values.

Table 14 (Provisional Data)

Great Baddow, England (51.7°N, 0.5°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.3						2.9
01		4.0						2.9
02		3.8						2.9
03		3.5						2.9
04		3.4						3.0
05		3.9						3.2
06		4.7						3.3
07		5.1						3.2
08		5.4						3.2
09		5.6						3.2
10		5.9						3.2
11		5.8						3.1
12		5.7						3.0
13		6.0						3.1
14		5.7						3.1
15		5.6						3.1
16		5.6						3.1
17		5.8						3.1
18		6.1						3.1
19		6.4						3.1
20		6.7						3.1
21		6.1						3.1
22		5.4						3.1
23		4.8						3.1

Time: 0°
Length of time sweep: Manual operation.
Average values.

Table 15 (Provisional Data)

Delhi, India (28.6°N, 77.2°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.8						2.8
01		4.6						
02		4.5						
03		4.3						
04		3.8						3.0
05		3.5						
06		4.8						
07		6.0						
08		6.6						3.0
09		7.0						
10		7.7						
11		8.7						
12		9.1						2.6
13		9.9						
14		10.5						
15		10.4						
16		10.4						2.7
17		10.0						
18		9.7						
19		8.8						
20		7.6						3.0
21		6.3						
22		6.2						
23		5.7						

Time: 75°E.
Length of time sweep: Manual operation.
Average values.

Table 16 (Provisional Data)

Maui, Hawaii (20.8°N, 156.5°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	300	5.3					0.2	2.9
01	280	5.4					0.2	2.9
02	250	5.1					0.2	3.1
03	240	4.9					0.2	3.2
04	240	3.6					0.2	3.1
05	250	3.4					0.2	3.1
06	250	3.8					0.2	3.2
07	240	5.7	220	3.5		2.3	0.2	3.3
08	260	6.0	200	4.2		2.7	0.2	3.2
09	320	6.3	200	4.5		3.0	0.2	2.9
10	370	7.0	200	4.7		3.3	4.6	2.6
11	400	8.0	200.	4.8		3.4	4.8	2.6
12	400	8.9	200	4.8		3.5	0.2	2.7
13	350	9.8	200	4.7		3.5	0.2	2.8
14	450	10.3	210	4.7		3.5	0.2	2.8
15	340	10.4	220	4.6		3.4	3.9	2.9
16	310	10.8	220	4.5		3.1	4.5	3.0
17	230	10.9	220	4.2		2.8	4.3	3.1
18	250	11.0	220	3.6			4.0	3.2
19	220	9.4					3.6	3.4
20	220	7.0					3.2	3.2
21	240	6.0					0.2	3.1
22	270	5.8					2.8	2.8
23	290	5.4					0.2	2.8

Time: 150.0°W.
Length of time sweep: ½ Mc to 16 Mc in one minute.
Median values.

Table 17.(Provisional Data)

Leyte (11.0°N, 125.0°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.7					3.4	2.9
01		5.3					3.4	2.9
02		5.2					3.5	3.1
03		4.5					3.1	3.2
04		4.1					3.0	3.4
05		3.4					2.9	3.4
06		3.3					2.7	3.2
07		6.0		2.9		1.9	4.2	3.3
08		7.1		3.7		2.7	5.2	3.2
09		7.3		4.5		3.2	5.5	2.9
10		7.8		4.8		3.5	5.7	2.5
11		7.7		4.9		3.7	6.0	2.5
12		7.6		5.0		3.8	6.5	2.5
13		7.8		6.0		3.8	6.3	2.4
14		8.1		5.0		3.7	6.1	2.4
15		8.3		4.8		3.6	5.9	2.4
16		8.8		4.6		3.4	6.3	2.5
17		9.3		4.2		2.9	6.2	2.6
18		9.3		3.4		2.6	5.2	2.8
19		9.1		2.3		1.7	5.1	2.8
20		8.6					4.2	3.0
21		8.0					3.8	3.0
22		7.1					3.0	3.0
23		6.4					3.6	2.9

Time: 135°E.
Length of time sweep: Manual operation.
Median values.

Table 18 (Provisional Data)

Colombo, Ceylon (6.6°N, 80°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.6						3.5
01		5.0						3.5
02		4.5						3.5
03		3.9						3.6
04		3.2						3.7
05								
06		3.6						3.3
07		6.6						3.3
08		8.0						3.1
09		8.3						3.8
10		7.9						3.7
11		7.7						2.7
12		7.6						2.7
13		7.8						2.7
14		7.8						2.7
15		8.1						2.7
16		8.4						2.8
17		8.7						3.0
18		9.0						2.8
19		8.8						3.2
20		8.4						3.2
21		7.3						3.4
22		6.6						3.6
23		5.9						3.5

Time: 80°E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Average values.

Table 19 (Provisional Data)

Christmas I. (1.9°N, 157.3°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240						2.2	
01	240						2.2	
02	240						2.1	
03	220						2.1	
04	220	5.1					2.1	3.2
05	220	3.7					1.9	3.5
06	230	3.0					2.0	3.6
07	230	4.9				2.1	3.3	3.0
08	210	6.2	200			2.8	6.2	2.9
09	310	6.8	200	4.5		3.2	7.5	2.6
10	360	7.0	200	4.6		3.5	7.6	2.6
11	390	7.6	200	4.6		3.6	7.6	2.5
12	400	7.5	190	4.7		3.8	7.6	2.5
13	390	7.8	190	4.7		3.7	7.6	2.4
14	400	7.8	200	4.6		3.6	7.6	2.4
15	370	8.1	200	4.5		3.5	7.6	2.5
16	350	8.5	200	4.4		3.2	7.6	2.6
17	300	8.8	200	4.0		2.8	7.0	2.6
18	230	8.8				2.2	4.6	2.7
19	260	8.3					3.1	2.7
20	280	7.2					2.1	2.7
21	280							
22	250						1.8	
23	250						1.9	

Time: 150°W.
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 20 (Provisional Data)

Cape York, Q., Australia (11.0°S, 142.4°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.7						3.5
01		3.5						3.5
02		2.8						3.8
03		2.2						3.1
04		2.4						3.0
05		2.5						3.0
06		3.8						3.2
07		6.2						3.4
08		7.6						3.2
09		8.5						3.3
10		9.0						3.4
11		8.8						3.2
12		9.4						3.2
13		9.2						3.2
14		8.5						3.1
15		8.1						3.1
16		7.5						3.2
17		6.8						3.3
18		6.3						3.1
19		5.9						3.0
20		5.2						3.2
21		4.2						3.1
22		3.9						3.1
23		3.8						3.3

Time: Local.
Average values.

Table 21 (Provisional Data)

Rarotonga I. (21.4°S, 159.6°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01		3.4						3.0
02								
03		3.2						3.3
04								
05		2.6						3.0
06								
07	240	4.6						3.3
08								
09	270	7.8	210	4.3		3.0		3.2
10								
11	265	7.9	212	4.5		3.3		3.4
12	280	7.0	210	4.6		3.3		3.3
13	280	6.9	205	4.6		3.2		3.2
14								
15	290	6.4	200	4.4		3.2		3.2
16								
17	250	6.8						3.2
18								
19	227	5.9						3.1
20								
21		4.3						3.0
22								
23		4.1						3.0

Time: 157.5°W.
Length of time sweep: 2.0 Mc to 16 Mc. Manual operation.
Median values.

Table 22 (Provisional Data)

Pitcairn I. (25.0°S, 130.0°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
0000								
0100								
0230	250	3.4						
0300								
0400								
0530	290	2.5						
0600								
0730	235	5.9	190	2.7				
0800								
0930	250	7.4	210	4.3				
1000								
1130	260	7.2	200	4.5				
1200								
1330	260	7.4	190	4.4				
1400								
1530	230	6.5	200	4.0				
1600								
1700								
1800								
1930	230	4.1						
2000								
2100								
2230	270	3.4						
2300								

Time: 127.5°W.
Length of time sweep: 1.0 Mc to 13 Mc. Manual operation.
Median values.

Table 23 (Provisional Data)

Brisbane, Q., Australia (27.5°S, 153.0°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.6						3.0
01		3.8						3.2
02		3.9						3.2
03		3.9						3.2
04		3.6						3.2
05		3.4						3.1
06		3.4						3.2
07		5.1						3.4
08		6.3						3.5
09		6.7						3.5
10		6.8						3.4
11		6.6						3.4
12		6.7						3.3
13		6.5						3.4
14		6.6						3.4
15		6.6						3.4
16		6.2						3.4
17		5.8						3.4
18		5.2						3.3
19		4.7						3.2
20		4.2						3.1
21		4.1						3.0
22		3.9						3.1
23		3.9						3.1

Time: Local.
Length of time sweep: 2.2 Mc to 12.5 Mc in two minutes thirty seconds.
Average values.

Table 24 (Provisional Data)

Kermadec Is. (29.2°S, 177.9°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	285	3.9						3.0
01	275	3.8						3.0
02	270	3.7						3.0
03	265	3.6						3.0
04	260	3.2						3.1
05	280	3.0						3.0
06	280	3.1						3.0
07	250	5.2						3.4
08	265	6.0	250	3.6	126	2.5		3.3
09	275	6.4	250	4.0	125	2.8		3.3
10	290	6.3	235	4.4	120	3.1		3.3
11	285	6.4	225	4.4	120	3.2		3.3
12	285	6.2	225	4.4	120	3.2		3.4
13	295	6.6	225	4.4	120	3.2		3.3
14	290	6.6	240	4.2	120	3.1		3.3
15	285	6.4	235	4.0	120	2.9		3.3
16	270	5.6	240	3.4	120	2.5		3.3
17	250	5.5				2.0		3.3
18	240	4.8						3.2
19	250	4.2						3.1
20	280	3.6						2.9
21	285	3.6						2.9
22	290	3.7						2.9
23	295	3.7						2.9

Time: 180°E.
Length of time sweep: 1.8 Mc to 12.0 Mc. Manual operation.
Median values.

Table 25 (Provisional Data)

Watheroo, W. Australia (30.3°S, 115.9°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.3						3.1
01		3.4						3.1
02		3.5						3.1
03		3.6						3.1
04		3.4						3.1
05		3.3						3.2
06		3.4						3.3
07		5.0						3.5
08		5.7						3.5
09		6.1						3.4
10		6.4						3.3
11		6.6						3.3
12		6.6						3.3
13		6.7						3.3
14		6.8						3.3
15		6.6						3.4
16		6.1						3.4
17		5.7						3.4
18		4.9						3.4
19		3.9						3.3
20		3.3						3.2
21		3.3						3.1
22		3.2						3.1
23		3.2						3.1

Time: Local.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Average values.

Table 26 (Provisional data)

Mt. Stromlo, N.S.W., Australia (35.3°S, 149°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		3.5						2.9
01		3.6						3.0
02		3.6						3.0
03		3.6						3.0
04		3.6						3.0
05		3.3						3.1
06		3.1						3.0
07		4.6						3.1
08		5.4						3.2
09		5.3						3.2
10		6.2						3.2
11		6.4						3.2
12		6.5						3.2
13		6.6						3.2
14		6.6						3.2
15		6.3						3.3
16		5.9						3.2
17		5.5						3.2
18		4.9						3.1
19		4.2						3.0
20		4.1						3.0
21		3.8						3.0
22		3.6						3.0
23		3.6						3.0

Time: Local
Length of time sweep: 1.6 Mc to 12.5 Mc in two minutes.
Median values.

Table 27 (Provisional Data)

Christchurch, N.Z. (43.5°S, 172.6°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	260	3.1					2.8	
01	250	3.0					3.1	
02	250	3.0					3.0	
03	250	2.7					3.0	
04	250	2.3					3.0	
05	240	2.0					2.9	
06	250	2.1					2.9	
07	230	3.7					2.6	
08	240	4.8	225	3.0	100	2.0	2.7	
09	250	5.3	225	3.8	100	2.5	3.6	
10	260	5.5	220	4.0	105	2.7	3.7	
11	270	5.8	200	4.2	110	2.9	3.8	
12	270	6.0	210	4.2	105	3.0	3.5	
13	260	6.4	210	4.2	110	2.9	3.4	
14	260	6.3	215	4.0	105	2.8	3.2	
15	250	6.0	210	3.8	100	2.6	3.0	
16	240	6.0	230	3.2	110	2.2	2.8	
17	220	5.2	210	2.2		1.5	2.0	
18	220	4.1					2.5	
19	240	3.8					2.7	
20	250	3.5					2.8	
21	250	3.3					3.1	
22	260	3.2					3.0	
23	265	2.9					3.2	

Time: 172.5°E.
Length of time sweep: 1.0 Mc to 13 Mc. Automatic.
Median values.

Table 28 (Provisional Data)

Campbell I. (52.5°S, 169.2°E) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01								
02								
03								
04								
05		2.5						2.5
06								
07	236	3.6						3.2
08	225	4.4	180	2.4	105	2.1		3.5
09	235	4.9	198	3.0	105	2.4		3.5
10	250	5.4	200	3.8	105	2.6		3.4
11	255	5.6	200	3.9	105	2.8		3.3
12	260	5.8	200	4.0	105	2.8		3.4
13	250	5.9	205	3.8	110	2.6		3.4
14	240	5.8	200	3.6	105	2.5		3.4
15	235	5.6	200	3.2	105	2.3		3.4
16	230	5.5	185	2.2	110	2.0		3.4
17	213	5.0						3.2
18	230	4.3						3.1
19	245	4.0						2.9
20								
21	260	2.9						2.6
22								
23	295	2.6						2.7

Time: 165°E.
Length of time sweep: 1.0 Mc to 15 Mc. Manual operation.
Median values.

Table 29 (Provisional Data)

Leningrad, U.S.S.R. (59.7°N, 30.5°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.6						
01								
02								
03		5.8						
04		6.1						
05		6.2						
06		6.2						
07		6.2						
08		6.1						
09		6.2						
10		6.1						
11		6.1						
12		6.0						
13		6.0						
14		6.0						
15		6.0						
16		6.0						
17		6.1						
18		6.0						
19		5.7						
20		5.6						
21		5.5						
22		5.4						
23		5.5						

Time: 30°E.
Average values.

Table 30 (Provisional Data)

Burghead, Scotland (57.7°N, 3.5°W) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.1						
01		4.8						
02		4.4						
03		4.3						
04		4.3						
05		4.4						
06		4.8						
07		4.8						
08		5.0						
09		5.3						
10		5.3						
11		5.5						
12		5.4						
13		5.3						
14		5.2						
15		5.3						
16		5.2						
17		5.5						
18		5.5						
19		5.9						
20		5.7						
21		5.9						
22		5.8						
23		5.6						

Time, 0°.
Average values.

Table 31 (Provisional Data)

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.0						
01		4.4						
02		4.1						
03		4.0						
04		4.2						
05		4.9						
06		5.2						
07		5.7						
08		5.8						
09		5.8						
10		6.2						
11		6.1						
12		6.0						
13		6.0						
14		5.9						
15		5.8						
16		5.7						
17		5.6						
18		5.7						
19		5.4						
20		5.6						
21		5.6						
22		5.6						
23		5.2						

Time, 60°E.
Average values.

Table 32 (Provisional Data)

Moscow, U.S.S.R. (55.8°N, 37.6°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.7						
01		5.3						
02		4.7						
03		4.9						
04		5.1						
05		5.5						
06		5.9						
07		6.2						
08		6.2						
09		6.4						
10		6.5						
11		6.7						
12		6.6						
13		6.5						
14		6.2						
15		6.0						
16		6.1						
17		6.1						
18		6.1						
19		6.4						
20		6.5						
21		6.7						
22		6.6						
23		6.4						

Time, 30°E.
Average values.

Table 33 (Provisional Data)

Delhi, India (28.6°N, 77.2°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.3						
01		5.1						
02		5.3						
03		5.0						
04		4.6						
05		4.5						
06		5.3						
07		6.2						
08		6.5						
09		6.0						
10		7.5						
11		8.2						
12		8.9						
13		9.5						
14		9.6						
15		10.0						
16		9.9						
17		9.7						
18		9.0						
19		8.3						
20		7.6						
21		6.7						
22		6.2						
23		5.7						

Time: 75°E.
Length of time sweep: Manual operation.
Average values.

Table 34 (Provisional Data)

Moscow, U.S.S.R. (55.8°N, 37.6°E) June 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.4						
01		5.5						
02		5.0						
03		5.2						
04		5.7						
05		6.1						
06		6.2						
07		6.4						
08		6.2						
09		6.0						
10		6.3						
11		6.2						
12		6.0						
13		5.7						
14		5.5						
15		5.5						
16		5.9						
17		6.0						
18		6.7						
19		6.4						
20		6.9						
21		6.6						
22		6.0						
23		5.7						

Time: 30°E.
Average values.

Table 35

Washington, D.C. (39.0°N, 77.5°W) September 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	260	3.5					2.5	3.0
01	260	3.4					2.6	3.0
02	260	3.4					1.1	3.0
03	240	3.2					2.6	3.1
04	260	2.7					2.6	3.0
05	260	2.9					2.7	3.0
06	240	3.7			120	1.6	3.4	3.4
07	250	5.2	230	3.5	120	2.6	3.6	3.4
08	260	5.8	220	4.0	110	3.1	4.0	3.3
09	280	6.0	220	4.3	110	3.3	4.0	3.2
10	290	6.3	200	4.5	110	3.4	4.1	3.2
11	300	6.2	200	4.5	110	3.4	3.9	3.1
12	320	6.6	200	4.6	110	3.5		3.1
13	315	6.8	215	4.6	110	3.4		3.1
14	300	6.7	220	4.4	110	3.4		3.1
15	300	6.6	220	4.3	110	3.4	3.5	3.1
16	280	6.5	240	4.0	110	3.2		3.1
17	260	6.6	235	3.6	120	2.6	2.8	3.2
18	235	6.4			120	1.8	2.7	3.3
19	230	5.9					2.5	3.2
20	240	5.4						3.1
21	240	4.6						3.1
22	260	3.9						3.0
23	260	3.5					2.5	3.0

Time: 75°W.
Length of time sweep: 0.8 Mc to 14 Mc in two minutes.
Median values.

Table 36

(Corrections and additions to previously published provisional data)

Churchill, Canada (58.8°N, 94.2°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.2					5.8	
01							4.3	
02							4.2	
03							4.1	
04							3.8	
05				3.2	130	2.8	3.9	
06			270	3.5	120	3.0	3.5	
07		4.6	240	3.9	120	3.0		
08		4.9	230	4.0	120	3.0		
09			220	4.2	120	3.1		
10			210	4.3	110	3.2		
11		5.2	210	4.4	110	3.2		
12			210	4.3	110	3.2		
13			210	4.4	110	3.2		
14			210	4.4	110	3.1		
15			220	4.3	110	3.1		
16			230	4.2	120	3.0		
17			220	3.9	120	2.9		
18			240	3.7	130	2.8		
19			250	3.3		2.9	3.2	
20						2.9	3.4	
21							5.1	
22							6.3	
23							6.4	

Time: 90°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 37

(Corrections and additions to previously published provisional data)

Prince Rupert, Canada (54.3°N, 130.3°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	260						2.7	
01	285	3.2					2.7	
02	290						2.7	
03	335	2.8					2.7	
04	340	2.8					3.2	
05	290	2.8					2.7	3.1
06	275	3.7	215	2.9			3.0	
07	320		200	3.5	120	2.4	3.0	
08	345	4.6	195	3.9	110	2.8	3.2	3.0
09	330	4.8	190	4.0	100	2.7	2.8	
10	340		180	4.2	100	2.8	3.2	3.1
11	340		180	4.2	100	2.9	3.6	
12	330		180	4.3	100	2.9	3.9	3.1
13	335		180	4.3	100	3.0	3.0	
14	335		180	4.3	100	3.0	3.1	
15	320		190	4.3	100	2.9		
16	330		190	4.2	100	2.9		
17	300		200	4.0	100	2.7		
18	280		200	3.7	110	2.4	2.7	
19	240		200	3.3			2.8	3.5
20	240		210	3.0			2.9	3.5
21	240		220	2.9			2.4	
22	240	4.5					3.1	3.3
23	240						2.4	3.3

Time: 120°W.
Length of time sweep: Manual operation.
Median values.

Table 38

(Corrections and additions to previously published provisional data)

St. John's, Newfoundland (47.7°N, 52.7°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	240							
01	280	3.2						
02	285						2.0	3.2
03	280						2.0	
04	250			2.5			1.9	
05	250			2.9	100	1.8		
06	235	4.2	220	3.1	100	1.9	2.7	
07	230	4.8	200	3.6	100	2.4	3.4	
08	255		190	4.0	100	2.8	3.5	
09	270	5.4	195	4.3	100	3.0	3.6	
10	280	5.8	180	4.4	100	3.1		
11	290		190	4.8	100	3.2		
12	300		190	4.6	100	3.3		
13	300	5.6	190	4.6	100	3.2		
14	310		200	4.5	100	3.3		
15	300		195	4.4	100	3.0		
16	280	5.8	200	4.2	100	3.0		
17	260		200	4.0	100	2.7		
18	245		210	3.5	100	2.3	3.2	
19	230		220	3.0	110	1.8	3.0	
20	220					1.6	2.4	
21	215						2.6	
22	220	4.8					1.8	
23	230						2.0	

Time: 52.5°W.
Length of time sweep: Manual operation.
Median values.

Table 39

(Corrections and additions to previously published provisional data)

Ottawa, Canada (45.5°N, 75.8°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00								
01							2.4	
02							2.8	
03							2.6	
04								
05								
06	250			3.1		2.4	3.5	
07	315		220	3.9	130	2.8	4.2	
08	330	5.2	210	4.2	120	2.8	4.6	
09	330	5.3	200	4.4	120	3.0	4.8	
10	330	5.5	200	4.5	120	3.3	4.8	
11	350		200	4.6	120	3.2	4.9	
12	360		195	4.6	110	3.4	4.8	
13	355		200	4.6	110	3.4	4.5	
14	350		210	4.5	110	3.3	4.6	
15	350		210	4.4	120	3.1		
16	330		210	4.2	120	3.0	4.3	
17	310		220	4.0	120	2.8	4.0	
18	280		230	3.4		2.5	3.5	
19	250						2.6	
20	250						2.7	
21	250							
22	260							
23	270							2.9

Time: 75°W.
Length of time sweep: 1.93 Mc to 13.5 Mc. Manual operation.
Median values.

Table 40

(Corrections and additions to previously published provisional data)

Boston, Massachusetts (42.4°N, 71.2°W) August 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	270							
01	270	3.0						
02	270							
03	270							
04	285							
05	250	3.2			125	1.7		3.2
06	280		235	3.4	125	2.1		3.2
07	340		230	3.9	120	2.5	2.8	3.1
08	330		225	4.2	120	2.8	3.0	
09	315		215	4.4	120	2.9		
10	332		210	4.5	120	3.0		
11	358		205	4.5	115	3.1		
12	370		215	4.5	120	3.8		
13	385		225	4.5	115	3.4		
14	358	5.8	222	4.5	115	2.8		
15	350		230	4.3	115	2.8		
16	340		230	4.1	120	2.6		
17	305		230	3.8	125	2.4	2.4	3.0
18	265				130	1.9	2.4	
19	245						2.5	
20	240						2.9	
21	250	5.2					2.1	3.0
22	250	4.4					2.0	
23	280							

Time: 75°W.
Median values.

Table 41

(Corrections and additions to previously published provisional data)

San Francisco, Calif. (37.4°N, 122.2°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	270						3.4	
01	270						3.3	
02	270						3.8	
03	270						3.7	
04	260	3.4					3.8	
05	260						3.4	3.0
06	240		230	3.3	110	2.0	3.5	3.2
07	300		220	3.9	110	2.4	3.8	3.1
08	345	5.6	210	4.1	110	2.8	4.2	
09	370	6.0	210	4.3	110	3.1	4.2	
10	340		200	4.5	110	3.3	4.3	3.0
11	375	6.1	200	4.6	110	3.4	4.3	2.8
12	370		200	4.6	110	3.5	4.3	
13	350	6.5	200	4.6	110	3.5	4.2	
14	340	6.5	215	4.5	110	3.4	4.2	
15	330		220	4.4	110	3.3	4.0	
16	320	6.2	230	4.3	110	3.1	3.9	3.1
17	300		230	3.9	110	2.7	3.8	
18	260	6.1	230	3.4	110	2.3	3.8	
19	230						3.3	
20	230	5.8					3.6	
21	235						3.6	
22	250	4.4					3.1	
23	260	3.8					3.4	3.0

Time: 120°W.
Length of time sweep: 0.8 Mc to 12 Mc in six minutes. Record centered on the hour.
Median values.

Table 42

(Corrections and additions to previously published provisional data)

Baton Rouge, Louisiana (30.5°N, 91.2°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	295	3.9						
01	300	3.8						
02	300							
03	290							
04	290	3.2						
05	280							
06	280		250	3.2	130	2.0		3.2
07	300		240	3.7	130	2.4		
08	300		230	4.0	120	2.7		
09	330	6.1	230	4.4	120	3.0		
10	340	6.4	230	4.6	120	3.2		
11	360	6.4	230	4.6	120	3.2		
12	370		240	4.6	120	3.3		
13	350	7.3	230	4.7	120	3.3		
14	340		240	4.6	120	3.4		
15	330		230	4.5	120	3.3		
16	320		230	4.2	120	3.0		
17	300		240	3.8	130	2.7		3.2
18	285		250	3.2	130	2.1		
19	250							
20	240							
21	250							
22	260	4.4						
23	290							

Time: 90°W.
Length of time sweep: 1.9 Mc to 9.8 Mc in three minutes, thirty seconds.
Median values.

Table 43

San Juan, Puerto Rico (18.4°N, 66.1°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.6						2.9
01		4.5						2.9
02		4.4						3.0
03		4.2						3.0
04		3.8						3.0
05		3.4						3.0
06		3.8						3.2
07	240	5.4						3.3
08	280	5.8	200	3.7		2.9		3.2
09	320	5.9	200	4.2		3.0		3.0
10	385	6.2	205	4.4		3.3		2.8
11	385	6.7	220	4.6		3.4		2.8
12	360	7.7	220	4.6		3.4		2.7
13	340	8.9	220	4.5		3.4		2.8
14	330	9.2	210	4.5		3.4		2.8
15	330	9.3	230	4.4		3.3		2.9
16	310	8.9	220	4.2		3.0	4.1	2.9
17	300	9.2	220	3.8			4.1	3.0
18	260	9.2	240	3.2			3.8	3.1
19	230	8.0						3.2
20		6.3						3.0
21		5.8						3.0
22		4.8						2.9
23		4.8						2.9

Time: 60°W.
Length of time sweep: 2.7 Mc to 14 Mc in six minutes. Record centered on the hour.
Median values.

Table 44

(Corrections and additions to previously published provisional data)

Huancayo, Peru (12.0°S, 75.3°W) August 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	230							
01	230							3.3
02	230							
03	240							
04	250							
05	275							
06	270					1.3	3.0	
07	240					2.3	5.5	
08	300		230	4.4		2.9	8.4	
09	350		220	4.5		3.4	10.5	
10	370		220	4.6		3.5	10.7	
11	400		210	4.6			10.9	
12	420	6.8	210	4.7		3.6	11.0	
13	410		200	4.6		3.6	10.8	
14	390		210	4.6		3.6	10.7	
15	350	7.3	210	4.4		3.1	10.0	
16	220			4.4		2.7	8.3	
17	240					2.3	5.2	
18	280					1.1		
19	320							
20	300							
21	280							
22	240							
23	230							

Time: 75°W.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 45

(Corrections and additions to previously published provisional data)

Great Baddow, England (51.7°N, 0.5°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		4.9					2.3	
01		4.6					2.2	3.0
02		4.3					2.0	
03		3.8					2.0	
04		3.8					1.6	
05				2.8		1.8	3.0	
06				3.6		2.2	3.8	
07				4.0		2.5	4.6	3.2
08		5.4		4.2		2.8	4.8	
09		5.9		4.4		3.0	5.1	
10		5.6		4.4		3.1	5.0	3.1
11				4.5		3.0	5.0	3.1
12		5.5		4.5		3.3	5.0	3.0
13		5.7		4.5		3.1	5.0	3.0
14		5.6		4.4			4.8	
15		5.6		4.4		3.0	4.3	3.0
16		5.6		4.3		2.8	4.3	
17		5.6		4.0		2.7	4.3	
18				3.6		2.3	4.3	
19		6.4				1.9	4.0	
20		6.7					3.8	
21							2.8	
22							3.1	
23		5.3					2.6	3.0

Time: 0°
Length of time sweep: Manual operation.
Median values.

Table 46

(Corrections and additions to previously published provisional data)

Maui, Hawaii (20.8°N, 156.5°W) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		6.4						
01	250	6.2						
02								
03								
04								
05								
06								
07			228	3.6	118	2.5	2.9	
08							3.8	
09		6.0					4.6	
10					108		4.4	
11							4.8	
12			200				4.7	
13	408			4.7	108		4.0	
14		9.2					4.4	
15			220				4.6	
16							4.3	
17							3.9	
18			215				4.2	
19	242						3.0	
20	238						2.8	
21								
22							2.9	
23								2.9

Time: 150°W.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 47

(Corrections and additions to previously published provisional data)

Leyte (11.0°N, 125.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00								
01		4.9					2.2	
02								
03								
04								
05								
06								
07				2.6		1.9		
08						2.7		
09				4.5				
10		7.6					5.0	
11								
12				5.0				
13		7.9						
14				4.9			6.4	
15		8.0						
16							5.8	
17				4.2				
18		9.0					5.3	
19							4.6	
20								
21								
22								2.9
23								

Time: 135°E.
Length of time sweep: Manual operation.
Median values.

Table 48

Colombo, Ceylon (6.6°N, 80.0°E) July 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.7						3.6
01		4.6						3.7
02		4.2						3.5
03		3.0						3.6
04		2.3						3.7
05								3.5
06		3.6						3.4
07		6.4				2.8		3.4
08		7.8		4.4		3.1	4.0	3.1
09		8.3		4.5		3.5	5.0	2.8
10		7.9		4.7		3.8	6.4	2.7
11		7.6		4.7		3.7	6.6	2.7
12		7.6		4.8		3.8	6.4	2.8
13		7.7		4.7		3.7	6.0	2.8
14		8.0		4.7		3.6	5.9	2.7
15		8.3		4.6		3.4	5.0	2.8
16		8.7		4.4		3.2	4.8	2.8
17		8.8				2.7		2.9
18		9.0						3.2
19		8.7						3.3
20		8.4						3.3
21		7.4						3.4
22		6.6						3.5
23		6.2						3.5

Time: 80.0°E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 49

(Corrections and additions to previously published provisional data)

Watheroo, W. Australia (30.3°S, 115.9°E) July 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250						3.0	
01	250						3.0	
02	240	3.6					3.0	3.0
03	235	3.9					3.0	
04	222						3.0	
05	220	3.3					2.9	
06	230	2.7					3.0	
07	230	3.9				1.5	3.0	3.4
08	230	5.4				2.1	3.0	
09	250	6.0	220	3.8		2.5	3.2	3.5
10	260		225	4.1		2.8	3.6	
11	265		220	4.2		3.0	3.6	
12	270	6.3	220	4.4		3.0	3.6	
13	280	6.5	212	4.3		3.0	4.2	
14	270	6.7	222	4.2		2.9	3.2	
15	260	6.8	220	3.9		2.7	3.8	
16	245	6.5				2.4	3.3	
17	230	5.8				1.8	3.2	
18	220	4.8					3.1	
19	218	3.4					3.1	3.4
20	230	2.9					3.0	
21	240						2.9	
22	240						3.0	
23	248	3.5					3.0	

Time; Local.
Length of time sweep; 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 50

(Corrections and additions to previously published provisional data)

Simonstown, Union of S. Africa (33.9°S, 18.7°E) July 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		2.3						
01		2.6						
02		2.7						
03								2.8
04		3.0						3.1
05								
06		2.4						3.0
07		2.3						
08								3.3
09								
10								
11								3.2
12		6.4						
13		6.4						3.0
14		6.2						3.0
15								
16		6.8						
17		6.4						
18		4.7						
19								
20								
21		4.0						
22								
23								3.0

Time; 30°E.
Length of time sweep; 2 [illegible] to 16 Mc in one minute.
Median values.

Table 51

(Additions to previously published provisional data)

Christchurch, N.Z. (43.5°S, 172.6°E) July 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00							3.0	
01							3.5	
02		2.6					3.0	
03							3.0	
04							3.0	
05							2.8	
06							2.6	
07		2.3					2.1	
08							2.0	
09		4.8					2.8	
10							3.2	
11							3.5	
12							4.4	
13							3.9	
14							4.0	
15							3.4	
16							3.3	
17							2.5	
18							2.7	
19							2.2	
20							1.8	
21		2.6					2.3	
22							1.7	
23							3.0	

Time; 172.5°E.
Length of time sweep; 1.0 Mc to 13 Mc. Automatic.
Median values.

Table 52

Tykhi Bay, U.S.S.R. (80.3°N, 52.8°E) June 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250	5.0						
01	260	5.0						
02								
03								
04								
05								
06								
07								
08								
09								
10	310	5.2	210	4.1				
11								
12	310	5.2	200	4.3				
13								
14	310	5.1	200	4.0				
15								
16								
17								
18								
19	260	5.5	200	3.8				
20								
21								
22	240	5.1						
23								

Time; 60°E.
Average values.

Table 53

Leningrad, U.S.S.R. (59.7°N, 30.5°E) June 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	310	5.0						
01	310	4.8						
02	330	4.8						
03	320	4.8						
04	300	4.9						
05	300	5.2						
06	310	5.3						
07	320	5.4						
08	350	5.5						
09	360	5.6	280	4.5				
10	370	5.6	280	4.6				
11	380	5.5	270	4.7				
12	380	5.4	280	4.6				
13	360	5.5	280	4.5				
14	360	5.5	270	4.5				
15	360	5.5	270	4.6				
16	360	5.4	280	4.6				
17	360	5.3	280	4.6				
18	350	5.3						
19	310	5.3						
20	310	5.4						
21	310	5.6						
22	320	5.2						
23	310	5.0						

Time: 30°E.
Average values.

Table 54

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E) June 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	220	5.8						
01	225	5.3						
02	230	5.0						
03	240	4.9						
04	230	5.1	200	3.0	120	1.8		
05	250	5.5	210	3.6	110	2.2		
06	270	5.8	200	3.9	100	2.6		
07	290	6.0	195	4.2	100	2.8		
08	290	6.2	190	4.3	100	3.0		
09	285	6.2	185	4.3	100	3.1		
10	285	6.4	180	4.5	100	3.2		
11	280	6.4	180	4.5	100	3.2		
12	275	6.4	180	4.5	100	3.3		
13	280	6.2	180	4.5	100	3.3		
14	280	6.2	190	4.5	100	3.2		
15	280	6.0	180	4.4	100	3.2		
16	270	5.8	190	4.2	100	3.0		
17	250	5.7	200	4.0	100	2.8		
18	230	5.8	200	3.9	100	2.5		
19	210	5.8			105	2.1		
20	210	6.1			110	1.9		
21	220	6.4						
22	210	6.4						
23	220	6.3						

Time: 60°E.
f°F2, median values; others, average values.

Table 55

Tomsk, U.S.S.R. (56.4°N, 85.0°E) June 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	240	5.8						
01	240	5.4						
02	240	5.1						
03	250	4.8						
04	250	4.9						
05	280	5.3	230	3.6	100	2.0		
06	320	5.6	230	3.8	100	2.4		
07	310	5.9	220	4.1	100	2.7		
08	320	6.1	220	4.3	100	2.9		
09	320	6.1	220	4.3	100			
10	300	6.4	210	4.5	100	3.3		
11	300	6.6	220	4.7	100	3.5		
12	310	6.4	210	4.6	100	3.5		
13	330	6.4	200	4.6	100			
14	320	6.3	220	4.5	100	3.4		
15		6.2						
16	300	6.2		4.3				
17	290	6.0	220		100	2.8		
18	290	5.9	220	3.7	100	2.6		
19	280	5.9	230		100	2.4		
20	230	6.0			110	2.1		
21	230	6.2				1.5		
22	230	6.4						
23	230	6.2						

Time: 90°E.
Average values.

Table 56

(Corrections and additions to previously published provisional data)

Great Baddow, England (51.7°N, 0.5°E) June 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00		5.4					1.4	
01		5.1					1.2	2.8
02		4.8					1.6	
03		4.6					2.4	
04		4.6		2.6		1.4	2.0	
05				3.4		2.0	3.0	
06				3.8		2.4	3.5	
07		5.8		4.1		2.8	4.0	
08		5.8		4.3		3.0	4.2	
09				4.5		3.1	4.6	
10		6.1		4.6		3.2	4.8	
11		6.0		4.6		3.2	4.7	3.0
12		5.8		4.6		3.2	4.2	
13				4.6		3.2	4.2	
14		5.9		4.6		3.2	4.1	
15		5.8		4.5		3.1	4.1	2.9
16				4.3		2.9	4.0	
17				4.2		2.7	4.3	
18		6.5		3.8		2.3	4.1	3.0
19				3.2		1.9	3.3	
20							3.3	
21							2.4	3.0
22							2.8	2.9
23		5.8					1.2	

Time: 0°
Length of time sweep: Manual operation.
Median values.

Table 57

Alma Ata, U.S.S.R. (43.5°N, 76.5°E) June 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		5.9						
01		5.8						
02		5.4						
03		5.4						
04		5.2						
05		5.3						
06		6.1						
07		7.1						
08		7.5						
09		7.2						
10		7.2						
11		7.5						
12		7.4						
13		7.5						
14		7.2						
15		6.8						
16		6.9						
17		6.7						
18		6.7						
19		6.9						
20		7.3						
21		6.8						
22		6.5						
23		6.1						

Time: 75°E
Average values.

Table 58

(Corrections of previously published provisional data)

Leyte (11.0°N, 125.0°E) June 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00								
01		5.3					3.2	
02								
03								
04							2.5	
05		3.6						
06								
07								
08		7.3						
09								
10								
11								
12								
13								
14				5.0				
15		8.0						
16								
17		8.6						
18		9.0						
19							4.6	
20								
21								
22		6.3					3.6	
23								

Time: 135°E.
Length of time sweep: Manual operation.
Median values.

Table 59

(Corrections and additions to previously published provisional data)

Watheroo, W. Australia (30.3°S, 115.9°E) June 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250						3.0	
01	250	3.4					3.0	2.9
02	245	3.5					3.0	
03	240						3.0	
04	235						3.0	3.1
05	225	3.3					3.0	
06	225	2.8					3.1	3.2
07	230	4.0				1.6	3.0	
08	230	5.4				2.1	3.1	
09	242	6.0		3.9		2.5	3.2	
10	260		235	4.1		2.8	3.6	
11	265		225	4.3		3.0	3.5	
12	270		215	4.3		3.0	4.0	3.4
13	270		223	4.2		3.0	3.6	
14	265	7.0	225	4.1		2.9	4.1	
15	260	6.9	230	3.9		2.7	4.1	3.3
16	238	6.7				2.2	3.6	
17	220	5.6				1.6	3.9	
18	215	4.0					3.6	3.4
19	225						3.1	
20	230	2.7					3.1	
21	240	2.9					3.0	3.1
22	250	3.1					3.1	
23	250	3.0					3.0	

Time: Local.
Length of time sweep: 16 Mc to 0.5 Mc in fifteen minutes.
Median values.

Table 60

Simonstown, Union of S. Africa (33.9°S, 18.7°E) June 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		2.3						2.9
01		2.5						2.3
02		2.6						2.8
03		2.8						2.8
04		2.8						2.9
05		2.7						3.0
06		2.5						2.9
07		2.4						2.9
08		4.4						3.2
09		5.5						3.3
10		5.9						3.2
11		6.0						3.2
12		6.2						3.2
13		6.5						3.1
14		6.5						3.1
15		6.7						3.1
16		6.4						3.1
17		6.2						3.2
18		4.4						3.2
19		2.8						3.0
20		2.6						3.0
21		2.7						3.1
22		2.5						3.1
23		2.3						2.9

Time: 30°E.
Length of time sweep: 2 Mc to 16 Mc in one minute.
Median values.

Table 61

Tykhi Bay, U.S.S.R. (80.3°N, 52.8°E) May 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	250	4.4						
01	260	4.2						
02								
03								
04								
05								
06								
07								
08								
09								
10	280	4.6						
11								
12	250	5.0						
13								
14	260	4.9						
15								
16								
17								
18								
19	230	5.1						
20								
21								
22	230	4.9						
23								

Time: 60°E.
Average values.

Table 62

Oslo-Kjeller (59.9°N, 11.0°E) 3 to 7, 21 to 31 May 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00		4.6						
01		4.2						
02		4.0						
03		3.9						
04		3.8						
05		4.1						
06		4.5						
07		4.9						
08		4.9						
09		4.9						
10		5.1						
11		4.9						
12		4.9						
13		4.9						
14		5.0						
15		5.0						
16		5.1						
17		5.1						
18		5.4						
19		5.0						
20		4.9						
21		5.0						
22		5.0						
23		4.9						

Time: 15°E.
Length of time sweep: 16 Mc to 1.63 Mc in ten minutes.
Average values.

Table 63

Leningrad, U.S.S.R. (59.7°N, 30.5°E) May 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	340	3.8						
01	350	3.5						
02	360	3.4						
03	360	3.6						
04	330	4.1						
05	310	4.3						
06	300	4.5						
07	300	4.7						
08	300	5.0						
09	300	5.3						
10	310	5.7						
11	310	5.7						
12	320	5.8						
13	320	5.7						
14	320	5.3						
15	320	5.4						
16	320	5.3						
17	310	5.2						
18	300	5.3						
19	300	5.1						
20	300	5.1						
21	310	5.0						
22	320	4.4						
23	320	4.1						

Time: 30°E.
Average values.

Table 64

Sverdlovsk, U.S.S.R. (56.7°N, 61.1°E) May 1945

Time	h'F2	foF2	h'F1	foF1	h'E	foE	fEs	F2-M3000
00	220	4.8						
01	230	4.3						
02	230	3.9						
03	230	3.8						
04	220	4.2	230	2.6	140	1.8		
05	240	4.7	200	3.4	110	2.0		
06	260	5.2	195	3.7	100	2.4		
07	280	5.3	190	4.0	100	2.6		
08	280	5.4	190	4.1	100	2.8		
09	290	5.6	190	4.2	100	3.0		
10	290	6.0	185	4.3	100	3.1		
11	280	6.3	190	4.4	100	3.2		
12	270	6.4	190	4.4	100	3.3		
13	270	6.1	180	4.3	100	3.3		
14	260	5.9	190	4.2	100	3.2		
15	260	5.9	190	4.2	100	3.0		
16	250	5.6	190	4.1	100	2.8		
17	230	5.6	200	3.8	100	2.6		
18	210	5.6	200		105	2.3		
19	210	5.4			120	1.9		
20	210	5.6			120	1.7		
21	220	6.0						
22	210	5.7						
23	220	5.4						

Time: 60°E.
foF2, median values; others, average values.

Table 65

Tomsk, U.S.S.R. (56.4°N, 85.0°E) May 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	260	4.8						
01	260	4.4						
02	260	4.0						
03	260	3.8						
04	260	3.9						
05	240	4.5			110	1.7		
06	260	4.8	230	3.6	100	2.2		
07	300	5.2	220	3.8	100	2.5		
08	320	5.6	220	4.0	100	2.8		
09	340	6.0	220	4.2	100	3.1		
10	340	6.3	210	4.5	100	3.2		
11	310	6.4	210	4.6	100	3.9		
12	310	6.4	220	4.5	110	3.4		
13	320	6.6	220	4.4	100	3.4		
14	300	6.4	230	4.2	100	3.3		
15	300	6.2	240	4.1	100	3.0		
16	300	6.0	230	3.9	100	2.8		
17	320	6.0	220	3.7	100	2.7		
18	280	5.8	220	3.6	100	2.3		
19	250	5.7	230		100	2.2		
20	240	5.8			110	1.8		
21	240	6.1						
22	240	5.9						
23	250	5.4						

Time: 90°E.
Average values.

Table 66

Moscow, U.S.S.R. (55.8°N, 37.6°E) May 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	320	5.2						
01	320	4.4						
02	330	4.4						
03	330	4.0						
04	320	4.4						
05	300	4.9	210	2.5	100	1.7		
06	300	5.2	200	3.1	100	2.2		
07	320	5.6	210	3.4	100	2.6		
08	340	5.8	210	3.9	110	2.7		
09	340	6.0	210	4.0	110	2.9		
10	330	6.4	220	4.0	100	3.1		
11	360	6.2	210	4.0	100	3.0		
12	340	6.2	220	4.1	100	2.9		
13	350	6.0	210	4.0	110	2.8		
14	340	5.9	210	3.9	110	2.7		
15	350	5.6	210	3.8	110	2.5		
16	340	5.6	200	3.6	120	2.3		
17	330	5.7	210	3.2	120	1.9		
18	300	5.9						
19	300	6.2						
20	290	6.6						
21	300	6.5						
22	300	6.1						
23	300	5.7						

Time: 30°E
Average values.

Table 67

Alma Ata, U.S.S.R. (43.5°N, 76.5°E) May 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	230	5.4						
01	240	5.3						
02	230	5.1						
03	240	5.1						
04	240	5.2						
05	230	5.6						
06	210	5.9						
07	230	6.3						
08	220	6.9						
09	210	7.0						
10	210	7.1						
11	220	7.3						
12	210	7.6						
13	200	7.5						
14	210	7.8						
15	210	7.4						
16	210	7.2						
17	220	6.7						
18	240	6.6						
19	230	6.5						
20	240	6.2						
21	230	5.8						
22	230	5.8						
23	230	5.1						

Time: 75°E.
Average values.

Table 68

Leningrad, U.S.S.R. (59.7°N, 30.5°E) April 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	360	3.2						
01	380	3.0						
02	390	2.9						
03	390	3.1						
04	350	3.6						
05	320	4.1						
06	300	4.8						
07	280	5.2						
08	270	5.4						
09	290	5.6						
10	280	5.9						
11	280	6.2						
12	280	6.2						
13	290	6.0						
14	290	5.8						
15	290	5.8						
16	290	5.7						
17	290	5.5						
18	300	5.8						
19	300	5.2						
20	300	5.0						
21	310	4.6						
22	320	4.0						
23	340	3.6						

Time: 30°E.
Average values.

Table 69

Leningrad, U.S.S.R. (59.7°N, 30.5°E) March 1945

Time	h'F2	f°F2	h'F1	f°F1	h'E	f°E	fEs	F2-M3000
00	380	1.9						
01	400	1.7						
02	400	1.6						
03	380	1.8						
04	370	2.0						
05	360	2.2						
06	340	2.8						
07	300	3.5						
08	290	4.1						
09	270	4.6						
10	270	5.0						
11	260	5.2						
12	260	5.2						
13	280	5.2						
14	280	5.2						
15	290	5.2						
16	290	4.9						
17	280	4.6						
18	280	4.3						
19	310	3.7						
20	320	3.3						
21	330	2.9						
22	350	2.5						
23	370	2.1						

Time: 30°E.
Average values.

TABLE 70

IONOSPHERE DATA- I

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_2$ in km for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	240	260	(250)	240	260	260	250	260	(260)	320	330	330	320	340	340	340	300	290	230	240	240	240	240	240
2	250	240	290	280	280	210	240	420	(520)	360	360	350	340	400	360	350	310	[270]C	[260]C	240	240	240	260	260
3	250	260	260	280	280	270	240	250	280	280	310	300	320	340	330	320	310	260	240	240	240	240	280	270
4	260	250	260	270	300	300	240	300	250	360	300	300	320	340	320	310	290	260	240	240	240	230	280	280
5	260	260	260	240	260	280	250	(300)	260	340	[310]C	320	310	290	300	300	280	290	250	230	240	240	260	260
6	280	270	280	260	270	260	240	260	280	260	280	280	320	300	320	310	320	280	260	230	230	220	[260]C	280
7	270	260	[250]C	240	C	C	230	270	260	260	280	300	320	320	310	280	280	260	250	230	240	(260)	240	240
8	250	240	240	240	250	260	240	250	260	270	280	300	320	320	290	(290)	300	260	240	230	230	220	240	260
9	240	240	240	270	260	240	230	250	260	280	280	300	310	290	290	280	280	270	260	240	(230)	240	240	230
10	260	(260)	260	240	240	260	220	240	260	320	300	300	320	300	300	300	320	280	240	240	240	240	240	260
11	260	240	240	240	270	(220)	240	260	260	280	280	310	330	320	320	310	280	280	220	220	230	240	240	280
12	280	300	260	240	250	(280)	230	280	(290)	300	320	360	360	340	310	320	310	260	260	280	230	240	240	260
13	280	260	260	240	280	260	260	270	(280)	360	340	380	360	360	350	340	310	280	240	240	230	240	260	260
14	C	C	C	C	C	C	C	C	C	C	290	300	[300]C	[310]C	300	280	280	250	240	220	220	250	240	270
15	260	260	260	260	280	270	240	260	(290)	270	320	300	340	370	340	300	280	260	240	220	240	260	(260)	260
16	260	260	240	240	260	260	240	250	280	300	[300]C	[310]C	[310]C	[330]C	[320]C	[300]C	300	[240]C	[220]C	[220]C	[250]C	[250]C	[260]C	[280]C
17	300	[290]*	[250]CK	[260]CK	300K	(340)K	280K	G K	360K	410K	G K	490K	G K	G K	G K	440K	380K	(280)K	280K	(250)K	230K	250K	300K	[300]K
18	300K	280K	(300)K	(260)K	[270]AK	(290)K	(280)K	280K	320K	360K	360K	520K	(480)K	400K	360K	310K	300K	320K	240	240	260	280	260	260
19	[290]A	290	(300)	(310)	(300)	(290)	(250)	260	260	250	270	320	310	340	300	300	280	260	220	220	220	220	230	240
20	280	280	270	270	240	240	210	240	260	260.	270	300	280	280	280	260	260	260	220	230	240	(250)	250	260
21	270	270	250	250	260	260	(250)	240	240	270	270	290	310	300	260	260	260	240	220	220	230	240	(260)	(260)
22	[260]A	260	240	240	240	(260)	220	230	240	250	260	300	270	280	280	280	260	240	220	220	230	[240]A	(280)	(260)
23	260	250	240	220	240	260	220	240	260	270	260	300	280	280	280	280	260	250	220	(220)	200	260	240	260
24	260	250	260	260	240	240	220	240	240	260	280	270	310	280	280	270	260	230	(230)	220	220	230	260	260
25	280	270	260	240	240	240	230	250	250	260	260	270	300	280	280	270	270	250	220	220	220	240	240	260
26	270	240	240	220	240	(260)	260	240	(260)	290	280	300	300	290	[290]C	280	260	240	220	220	240	240	230	280
27	260	260	240	240	250	240	250	260K	260K	320K	360K	320K	330K	340K	320K	320K	300	250	220	230	240	240	250	280
28	270	280	260	240	230	250	240	250	240	260	290	300	300	300	300	280	260	240	220	220	240	250	260	280
29	270	260	250	240	240	230	220	240	250	240	260	280	300	280	280	280	260	220	220	220	240	250	260	270
30	280	260	260	270	280	270	240	230	260	260	290	280	320	280	280	290	260	240	220	220	240	240	260	280
31																								
Sum																								
Median	260	260	260	240	260	260	240	250	260	280	290	300	320	315	300	300	280	260	235	230	240	240	260	260

TABLE 71

IONOSPHERE DATA- 2

Washington, D.C. Ionosphere Station.
(Location)

National Bureau Of Standards
(Institution)

Hourly values of $f^{\circ}F_2$ in (Mc) for September 1945
(Month)

Records measured by: J. M. C.
K. W. S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.3	(3.0)^{F}	(3.0)^{F}	(2.6)^{F}	(2.5)^{F}	(2.4)^{F}	3.8	5.0	5.1	5.5	5.7	6.0	5.8	5.7	5.7	6.0	6.5	(6.3)	(6.0)	6.5	6.4	5.2	4.5	3.6
2	(3.2)	(2.6)^{F}	(3.2)^{F}	(2.2)^{F}	(2.2)^{F}	[3.5]^{e}	4.0	(4.2)	4.7	5.2	5.6	5.6	5.4	5.2	5.3	5.3	5.5	[5.4]^{e}	[5.7]^{e}	5.8	5.4	4.8	3.7^{F}	3.4
3	3.4	3.0^{F}	2.7^{F}	2.9^{F}	2.8^{F}	3.1^{F}	4.1	5.5	6.0	5.9	6.2	(6.2)	5.9	5.8	6.2	6.1	6.0	6.0	(6.2)	(6.0)	(6.1)	4.8	4.5	4.2
4	4.0	3.6	3.4	2.4^{F}	1.9^{F}	2.8	3.8	5.2	5.3	5.5	6.4	5.8	(6.2)	6.2	6.3	6.3	6.4	6.5	6.6	6.4	5.5^{F}	(4.6)^{F}	3.7^{F}	3.5^{F}
5	3.4^{F}	(3.5)^{F}	(3.0)^{F}	2.9^{F}	(2.5)^{F}	2.4^{F}	3.5^{F}	4.5	4.9	5.9	[6.5]^{e}	6.8	7.4	(7.3)	7.1	6.6	6.0	(6.4)	6.4	(6.2)	6.3	5.4	4.5^{F}	4.0^{F}
6	3.4^{F}	3.4^{F}	3.4^{F}	(3.2)^{F}	2.7^{F}	2.2^{F}	3.8^{F}	5.7	5.7	6.5	6.3	6.3	6.4	6.4	6.2	6.4	6.1	6.5	(6.9)	(7.0)	(6.6)	5.2	[3.9]^{e}	3.5^{F}
7	3.4^{F}	(3.4)	[3.4]^{e}	3.3	C	C	4.0	5.2	6.2	5.9	6.3	6.6	6.5	7.1	(7.4)	(6.9)	6.5	6.5	6.4	6.4	6.1	[5.5]^{e}	4.8	4.4
8	4.0	3.8	3.6	3.4	(3.3)	3.3^{F}	4.5	6.0	6.2	6.8	6.6	6.3	(6.6)	(7.0)	(7.2)	[6.6]^{e}	6.4	6.6	(6.7)	(6.5)	(7.0)	5.7	5.1	4.7
9	4.3	3.8	3.4	3.4	(3.5)	(3.4)	4.6	5.7	6.5	7.0	(7.2)	(7.2)	7.9	(7.0)	(7.4)	(7.0)	(7.5)	7.5	(6.9)	(6.5)	(6.4)	6.1	5.3	4.6
10	3.9	3.4	3.4	(3.4)	(3.3)	3.1	4.4	5.2	5.8	6.3	6.6	[6.5]^{e}	(6.7)	(6.6)	(6.5)	6.5	7.0	7.2	(7.0)	(6.6)	6.7	5.9	4.7	4.5
11	3.9	3.8	(3.7)	(3.4)	3.3	(3.3)	4.2	5.5	6.4	(6.4)	(6.4)	(6.2)	6.6	6.8	(6.6)	(7.4)	(8.0)	(7.4)	(8.4)	(6.8)	5.9	5.2	4.0	4.3
12	(3.9)	3.4	3.4	3.3	(3.4)	(1.8)^{F}	3.4	5.0	5.3	5.5	5.6	6.0	5.9	6.1	6.2	6.0	6.2	5.7	5.7	5.8	5.5	4.7	3.9	3.4
13	3.5^{F}	(2.7)^{F}	(2.4)^{F}	2.2^{F}	(2.3)^{F}	2.2^{F}	3.5	4.6	4.7	4.9	5.5	5.6	5.9	6.1	6.0	6.4	6.4	6.2	6.2	6.0	5.0	4.1^{F}	(3.3)	(3.4)
14	C	C	C	C	C	C	C	C	C	C	6.3	6.5	[6.6]^{e}	[6.5]^{e}	6.3	(6.3)	6.5	6.5	6.4	(6.2)	5.5	5.0	4.1	3.7
15	3.6^{F}	3.3^{F}	2.9^{F}	2.6^{F}	2.4^{F}	(2.2)	3.7	5.0	5.2	5.5	5.8	5.9	5.5	5.7	5.8	(6.2)	5.8	5.7	5.7	5.3	(4.5)	4.0	(3.4)	3.3
16	[3.5]^{e}	3.4	3.4	(3.2)^{F}	2.8	3.1^{F}	3.7	4.8	5.8	5.8	[6.3]^{e}	[6.2]^{e}	[6.1]^{e}	[6.2]^{e}	[6.4]^{e}	[6.7]^{e}	7.3	[6.8]^{e}	[6.1]^{e}	[5.6]^{e}	[5.4]^{e}	[4.9]^{e}	[4.6]^{e}	[3.8]^{e}
17	4.1	[3.3]^{e}	[3.4]$^{G}_{K}$	[3.2]$^{e}_{K}$	(2.4)^{K}	1.8$^{F}_{K}$	(3.4)^{K}	<3.4$^{G}_{K}$	4.6^{K}	4.4^{K}	<4.0$^{G}_{K}$	(4.4)^{K}	<4.2$^{G}_{K}$	<4.2$^{G}_{K}$	<4.1$^{G}_{K}$	4.6^{K}	4.7^{K}	(4.6)^{K}	5.0^{K}	5.0^{K}	3.9^{K}	3.4^{K}	(2.7)^{K}	[2.6]$^{e}_{K}$
18	2.7^{K}	2.7^{K}	3.3^{K}	2.7^{K}	[2.5]$^{A}_{K}$	(2.6)^{K}	(3.5)^{K}	4.1^{K}	5.0^{K}	(5.2)$^{F}_{K}$	4.9^{K}	4.8^{K}	5.1^{K}	5.5^{K}	5.9^{K}	5.7^{K}	5.3^{K}	5.4^{K}	5.6	5.2	4.2	3.9	3.9	(3.5)
19	[3.0]^{A}	2.8	3.1	2.4	2.3^{F}	2.1^{F}	3.9	4.9	(6.2)	(6.2)	(6.0)	6.1	6.4	6.4	6.8	6.7	(7.2)	7.2	(6.4)	(6.4)	5.6	4.5	3.9	3.3
20	3.0	2.9	2.8	2.8	2.7	2.6	(3.8)	5.8	5.7	6.4	6.2	6.8	(7.2)	(7.0)	6.7	6.6	6.6	6.2	6.1	5.1	4.4	3.9	3.8	(3.6)
21	3.3	3.2	2.8	2.6	2.4^{F}	2.0^{F}	3.5	5.5	5.5	6.3	6.7	(6.9)	(7.0)	(7.8)	7.5	7.4	6.5	(6.6)	6.5	5.7	4.4	4.1	3.7	3.4
22	(3.4)	3.3	2.9^{F}	2.7	2.3^{F}	2.2^{F}	3.7	5.3	6.0	6.3	6.6	6.6	(7.2)	(7.2)	6.9	6.8	(7.2)	6.8	6.5	5.7	4.7	3.8	3.6	(3.5)
23	3.3	3.3	3.1	2.8	2.2	2.8^{F}	3.6	5.2	5.9	6.8	(7.4)	7.6	(7.5)	7.4	7.2	(6.8)	(6.8)	(6.8)	(6.6)	5.7	(4.5)	[4.0]^{e}	3.5	3.4
24	3.3	(3.3)	3.2	3.2	3.1	3.0	4.0	5.7	5.9	6.2	6.3	6.7	7.6	7.5	(7.4)	7.5	7.6	(6.6)	6.6	5.6	5.5	4.1	3.5	3.5
25	3.5	3.4	3.4	3.3	3.3	3.3	3.8	(5.7)	6.1	6.6	7.1	(7.3)	(7.6)	(8.0)	(7.6)	(7.8)	(7.8)	(7.6)	(6.9)	5.8	5.2	4.5	4.2	3.9
26	3.6	3.7	3.5	3.4	3.4	3.4	3.5	4.9	5.1	5.6	6.1	6.2	7.0	(7.2)	[7.6]^{e}	(7.5)	7.4	(7.1)	6.5	5.9	5.0	4.7	3.9	3.2
27	3.6	3.8	(3.5)	(3.3)	3.4	3.3	3.4	5.0^{K}	5.3^{K}	5.6^{K}	5.7^{K}	5.8^{K}	6.0^{K}	5.9^{K}	5.8^{K}	5.8^{K}	6.3	6.5	(5.9)	5.1	4.2	3.8	3.5	3.4
28	3.4	3.5	3.4	3.5	3.3	(3.1)	(3.5)	5.3	6.3	5.9	6.6	6.2	6.3	7.1	6.8	(6.6)	(6.8)	(7.3)	(7.0)	5.5	4.8	3.8	3.7	(3.7)^{F}
29	3.6^{F}	3.8	3.5	3.5	(3.3)	3.5	4.0	5.7	6.4	6.5	(6.7)	(7.1)	(7.3)	(7.5)	(7.5)	(7.5)	(7.6)	(6.9)	(6.5)	5.9	[5.3]^{e}	(4.5)	4.0	4.2
30	4.1	3.9	3.5	3.3	3.2	3.5	3.8	5.6	6.2	6.6	6.8	6.9	(7.8)	(7.6)	(7.7)	(7.8)	7.8	(7.8)	7.4	[5.6]^{e}	4.8	4.0	3.8	3.6
31																								
Sum																								
Median	3.5	3.4	3.4	3.2	2.7	2.9	3.8	5.2	5.8	6.0	6.3	6.2	6.6	6.8	6.7	6.6	6.5	6.6	6.4	5.9	5.4	4.6	3.9	3.5

TABLE 72

IONOSPHERE DATA - 3

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Half hourly values of f^0F_2 in {Mc / Kc} for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75°W MERIDIAN

Day	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330
1	(3.4)F	3.1F	3.2F	2.6	2.4F	(3.3)F	4.5	4.9	5.5	5.6	5.5	5.6	6.0	5.5	5.8	(6.2)	5.9	6.6	(6.4)	(6.2)	5.8	4.6	3.9	3.4
2	2.8F	2.3F	2.2F	2.2F	3.3F	3.9	4.3	4.8	5.0	5.3	5.4	5.5	5.2	5.2	5.3	5.1	5.2	[5.5]C	5.7	5.5	5.1	4.0	3.5F	3.4
3	(3.1)F	2.8F	2.8F	2.7F	2.8F	(3.4)	5.6	5.6	5.9	6.0	6.0	6.0	5.9	(6.1)	6.4	6.1	6.0	6.0	(6.2)	5.9	5.6	4.5	4.2	4.2
4	4.0	3.5	3.1F	1.9F	2.2F	(3.4)	4.2	5.9	5.1	6.0	6.2	5.8	5.9	5.9	6.4	6.2	6.6	6.5	6.2	(6.2)	5.0F	3.8F	3.7F	3.4F
5	3.3F	(3.1)F	(3.1)F	2.7F	2.6F	3.1F	4.4	5.1	5.7	6.1	6.7	7.0	(7.6)	(7.6)	6.7	6.6	6.2	6.4	6.6	(6.4)	5.8	5.0	(4.1)F	3.8F
6	3.4F	[3.4]C	3.2F	2.9F	(2.3)F	3.2F	4.7	5.6	6.0	6.2	6.4	6.4	6.2	6.2	6.3	6.3	6.4	6.6	6.8	(6.9)	6.0	4.3F	3.5F	3.5F
7	3.4F	3.4F	[3.3]C	C	C	C	4.7	5.4	6.3	6.0	(6.6)	(6.6)	6.8	(7.4)	(7.2)	6.8	6.4	6.6	6.2	(6.4)	5.8	5.2	4.6	4
8	3.8	(3.5)	3.4	(3.3)	3.2	(3.4)	5.2	6.2	6.5	6.6	6.4	6.6	6.6	[7.1]C	6.6	(6.6)	6.7	[6.7]C	6.5	(6.7)	(6.6)	5.3	4.9	4.4
9	4.1	3.6	3.4	3.5	3.4	3.5F	5.6	6.4	6.7	6.8	6.9	(7.0)	7.4	(7.8)	(7.1)	(7.5)	(8.0)	(7.0)	(6.3)	6.9	6.8	5.6	4.9	4.[illegible]
10	3.7	(3.4)	3.4J	3.4	3.0	(3.5)	4.6	5.7	5.9	6.4	6.6	6.4	6.6	(6.8)	6.4	6.6	(7.0)	[7.1]C	(7.0)	(6.6)	6.3	5.4	4.4	4.3
11	4.0	3.6	(3.5)	3.3	3.3	3.4	4.9	5.8	6.3	6.4	[6.3]C	6.3	(7.1)	6.9	(7.0)	(7.8)	7.2	[7.8]C	(7.0)	6.5	5.8	4.7	4.2	4.2
12	(3.4)	3.3	3.2	2.6	2.2F	2.8	4.5	5.1	6.2	5.5	5.5	6.0	6.1	6.1	6.2	5.9	6.0	5.8	5.9	5.7	(5.0)	4.3	(3.5)	3.4
13	3.4F	(2.2)F	(2.7)	2.2F	1.9F	2.7	4.0	4.5	4.9	(5.2)	5.3	5.6	6.2	5.9	6.0	6.4	(6.4)	6.1	5.8	5.5	4.5	3.6F	3.4	3.2F
14	C	C	C	C	C	C	C	C	C	C	6.3	[6.6]C	[6.5]A	[6.4]C	6.3	6.3	6.4	6.5	6.5	5.9	5.2	4.7	3.8	3.5F
15	3.3F	3.1F	(2.8)F	2.5F	2.2F	2.9F	4.7	5.2	5.8	5.4	(6.2)	5.6	5.7	5.6	(5.7)V	6.0	5.8	5.6	(5.4)	4.7	4.1	3.7	(3.4)	3.5
16	3.4	3.4	3.3	(2.8)F	2.9	3.3	4.4	5.2	5.8	5.7	[6.1]C	[6.3]C	[6.3]C	[6.3]C	[6.7]C	[6.9]C	[7.7]C	[6.6]C	[5.8]C	[5.4]C	[5.5]C	[4.5]C	[3.9]C	[3.8]C
17	[3.5]C	[3.3]C	[3.3]CK	2.9K	1.8FK	(2.8)FK	3.6K	[4.0]CK	(4.4)K	<4.0CK	4.2K	(4.6)K	4.5K	<4.2GK	4.6K	4.7K	4.8K	4.9K	4.8K	4.6K	(3.5)FK	(3.3)C	2.6K	2.6K
18	2.8K	3.3K	3.3K	2.4K	2.6K	2.5K	3.8K	(4.5)K	(5.0)K	5.1K	4.8K	(4.7)K	5.2K	5.7K	6.1K	5.6K	5.0K	5.7K	5.6	5.0	4.0	3.9	3.5	(3.3)
19	2.9	2.6	2.6	(2.5)	2.3	2.7	5.0	5.8	5.8	5.8	5.6	6.1	6.2	6.4	6.4	6.8	6.9	(7.0)	6.5	5.9	5.2	3.9	(3.3)	3.0
20	2.8	2.8	2.8	2.8	2.6F	2.7	4.2	5.6	6.4	6.4	6.4	(6.9)	(7.3)	(7.0)	6.6	6.5	6.4	[6.1]C	5.3	4.8	4.1	3.7	3.5	(3.4)
21	3.3	2.9	2.8	2.5	2.5	2.5	4.4	5.3	6.0	6.4	6.8	6.7	(8.0)	(8.0)	(7.8)	7.2	(6.8)	(7.1)	6.6	5.0	4.4	4.0	3.7	(3.3)
22	3.4	3.1	2.8F	2.4F	2.3F	2.6F	4.6	5.5	6.4	6.8	6.6	7.4	7.3	7.1	(6.8)	(7.0)	6.8	6.6	6.4	5.1	4.2	3.5	3.5	(3.4)
23	3.3	3.3	3.0	2.5F	2.3F	2.7F	4.8	5.6	6.2	(7.4)	6.8	(7.7)	7.4	7.6	(7.0)	(7.0)	6.8	6.8	(6.3)	5.0	4.3	(3.6)	3.4	3.4
24	(3.4)	3.3	3.1	3.2	3.2	3.3	4.8	5.7	(5.9)	6.6	6.6	(6.9)	7.6	(7.5)	(7.2)	(7.6)	(7.2)	6.6	(6.0)	5.6	4.5	3.8	(3.7)	3.4
25	3.5	3.5	[3.4]C	3.4	(3.0)V	3.3	4.7	(6.1)	6.5	(7.1)	7.6	(7.8)	(7.6)	(7.8)	(7.5)	(8.0)	(8.1)	[7.3]C	6.5	5.7	4.7	4.5	5.7	3.8
26	3.7	3.5	3.5	3.5	3.3	3.4	4.6	5.0	5.4	5.9	(6.2)	6.2	(7.0)	(7.4)	(7.2)	(7.5)	6.5	(7.0)	(6.0)	5.3	4.9	4.3	3.8	3.7
27	3.4	3.5	3.4	3.4	3.4	2.9	4.3	5.0K	5.1K	5.8K	5.7K	5.7K	(6.3)K	5.7K	5.9K	6.0K	6.4	6.4	5.4	4.8	4.0	3.7	3.5	3.4
28	(3.2)	(3.4)	3.5	(3.5)	3.3F	2.9	4.4	5.6	(5.6)	5.9	6.5	5.7	6.5	7.0	6.7	6.8	(7.0)	7.1	6.4	4.5	4.1	4.0	3.8	3.6
29	3.7F	3.5	3.5	3.5	3.7	3.4	4.9	6.0	6.4	6.5	7.0	(7.0)	(7.2)	(7.4)	(7.1)	[7.6]C	(7.3)	6.8	[6.1]C	5.6	4.8	4.2	4.1	4.1
30	3.9	3.8	3.6	3.2	3.4	3.4	5.0	5.8	6.6	6.5	6.7	(7.0)	(7.5)	(7.5)	(7.4)	7.7	(7.5)	(7.5)	6.4	5.1	4.3	3.8	(3.4)	3.[illegible]
31																								
Sum																								
Median	3.4	3.3	3.2	2.8	2.7	3.2	4.6	5.6	5.9	6.0	6.4	6.4	6.6	6.8	6.6	6.6	6.6	6.6	6.2	5.6	5.0	4.2	3.7	3.4

TABLE 73

IONOSPHERE DATA- 4

Washington, D.C. (Location) — Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $h'F_1$ in (mm / km) for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								220	[220]A	220	200H	210	190	190	200	220	[230]C	A						
2								240	220	200	220	220	200	220	210	220	[240]A	C	C					
3									[220]A	210	200	190H	180	210	220	230	220	220						
4								220	230	200	200	200	200	220	220	220	230	220						
5								220	[230]A	220	[210]C	200	220	220	220	220	(230)	240						
6								230	220	220	200	180	220	190	200	220	220	240						
7								220	240	220	200	200	200H	200	220	220	240	230						
8								230	[220]A	220	200	200	190	220	190H	220	(240)	[230]A						
9								220	230	210	200	200	210	200	[210]C	(220)	240	[230]A						
10								210	(230)	240	200	200	190H	200	210	240	[240]A	240						
11								220	[220]A	220	220	200	200	220	(200)	220	240	(220)						
12								230	[230]A	220	220	200	220	200	210	240	220	(230)						
13								230	220	210	230	200	220	220	220	230	230	240						
14								C	C	C	A	210	[220]C	[220]C	(200)	[210]C	220	220						
15								220	[220]C	220	200	190	180H	200	200	220	(220)	240						
16								220	(230)	220	[220]C	[210]C	[210]C	[210]C	[220]C	[220]C	240	C						
17								230K	240K	220K	200K	220K	200K	240K	(230)K	240K	240K	(240)K	260K					
18								(240)K	[220]HK	220K	200K	230K	220K	(240)K	240K	230K	250K	[240]CK						
19								240	220	200	190	180H	180	230	220	(220)	220	230						
20								230	210	220	210	200	200	190H	230	(240)	210	240						
21									A	(220)	200	230	200H	200	220	240	(210)							
22									230	220	(200)	200	180H	210	220	240	220							
23									230	220	200	200	200	220	220	(230)	240							
24									220	200	200	180H	200	200	200	220	240							
25								240	(240)	220	220	190	200	190	210	240	220	240						
26								220	(220)	240	200	200	190	240	[230]C	220	240							
27								230K	220K	220K	200K	200K	200K	210K	220K	230K	(240)	240						
28								230	220	210	200	190H	180H	220	220	230	240							
29								230	220	220	220	200	200	230	[220]C	220	250							
30								220	240	[220]C	220	220	210	230	220	240	240	(230)						
31																								
Sum																								
Median								230	220	220	200	200	200	215	220	220	240	235						

TABLE 74

IONOSPHERE DATA-5

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $f^{\circ}F_1$ in {Mo} for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								3.5	4.1	4.2	4.5^{H}	4.6	4.5	4.5	4.3	4.3	4.2	(3.8)						
2								4.0	4.2	4.2	4.5	4.4	4.5	4.6	4.3	4.2	[3.6]^{A}	C	C					
3								[3.5]^{A}	4.1	4.3	4.5	4.5^{H}	(4.6)	4.6	4.4	4.5	4.1	(3.6)						
4								(3.5)	4.0	4.3	4.5	4.6	4.6	4.6	4.4	4.4	4.1	(3.7)						
5								3.5	[4.2]^{A}	4.3	[4.6]^{C}	4.7	4.7	4.7	4.6	4.4	4.0	[3.7]^{L}						
6								(3.5)	4.1	4.4	4.5	4.6	4.8	4.6	4.6	4.4	[4.2]^{L}	[3.7]^{L}						
7								L	(4.1)	4.3	4.4	4.5	4.6^{H}	4.7	4.5	4.4	(4.1)	L						
8								L	(4.2)	4.5	4.4	4.6	[4.8]^{C}	(4.8)	4.5^{H}	4.2	L	A						
9								[3.7]^{L}	(4.2)	4.5	4.5	4.7	4.7	4.6	4.6	4.5	(4.1)	A						
10								L	L	4.4	4.5	4.6	4.8	4.5	4.2	4.4	(3.9)	L						
11								(3.4)	[3.8]^{A}	4.2	4.5	4.7	4.7	4.7	[4.5]^{L}	4.5	4.2	[3.9]^{L}						
12								L	[3.9]^{L}	4.3	4.4	4.6	4.6	4.5	4.4	4.3	4.1	L						
13								3.5	(3.6)	4.1	4.4	4.5	4.5	4.6	4.3	4.3	4.0	3.6						
14								C	C	C	(4.4)	4.6	[4.5]^{C}	[4.5]^{C}	4.4	[4.3]^{B}	L	L						
15								3.5	[3.9]^{C}	4.2	4.5	4.4	4.5^{H}	4.6	4.4	4.3	[3.9]^{L}	3.5						
16								3.5	4.0	4.2	[4.3]^{C}	[4.6]^{C}	[4.6]^{C}	[4.5]^{C}	[4.5]^{C}	[4.3]^{C}	4.0	C						
17								3.4^{K}	(3.9)^{K}	3.9^{K}	4.0^{K}	4.1^{K}	4.2^{K}	4.2^{K}	4.1^{K}	4.0^{K}	3.8^{K}	[3.6]$^{C}_{K}$	L^{K}					
18								(3.5)^{K}	3.8$^{H}_{K}$	4.0^{K}	4.2^{K}	4.2^{K}	4.3^{K}	4.3^{K}	4.3^{K}	4.0^{K}	3.9^{K}	(3.4)^{K}						
19								(3.4)	4.0	(4.1)	4.2	4.5^{H}	4.4	4.6	4.4	4.3	(4.0)	3.5						
20								C	L	4.1	4.3	4.5	4.4	4.4^{H}	4.3	4.0	3.9	L						
21									A	(4.2)	4.3	4.5	(4.7)^{H}	4.5	4.3	4.2	(4.0)							
22									L	4.3	4.5	4.6	(4.5)^{H}	4.5	4.4	4.1	(3.9)	L						
23									L	(4.4)	4.4	(4.8)	(4.7)	4.6	4.4	(4.3)	L	A						
24									L	(4.3)	(4.5)	4.5^{H}	(4.9)	4.5	(4.5)	4.3	L							
25								L	L	4.3	4.5	(4.4)	4.4	4.7	4.5	4.3	(3.5)	L						
26								3.5	[3.8]^{L}	4.2	4.4	4.4	4.5	4.5	[4.5]^{C}	4.5	(4.0)							
27								3.4^{K}	4.0^{K}	4.3^{K}	4.5^{K}	(4.4)^{K}	4.5^{K}	4.4^{K}	4.4^{K}	4.3^{K}	3.9	(3.6)						
28								L	L	[4.1]^{L}	(4.6)	[4.4]$^{H}_{L}$	4.5^{H}	4.7	4.5	4.3	L							
29								L	L	L	4.4	4.7	4.6	4.7	[4.6]^{C}	L	L							
30								(3.6)	L	C	(4.6)	[4.5]^{L}	(4.8)	4.6	(4.6)	(4.3)	3.9	L						
31																								
Sum																								
Median								3.5	4.0	4.3	4.5	4.5	4.6	4.6	4.4	4.3	4.0	3.6						

TABLE 75

IONOSPHERE DATA- 6

Washington, D.C. • Ionosphere Station
(Location)

National Bureau Of Standards
(Institution)

Hourly values of h'_E in {km} for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							120	120	110	120	120	120	110	110	120	120	120	120	120					
2							120	120	120	120	120	120	120	120	120	120	120	e	e					
3							120	110	110	120	110	110	110	110	110	110	110	110	110					
4							120	120	120	120	110	100	110	110	120	110	110	120	120					
5							120	120	120	120	[120]e	110	110	110	110	110	120	120	110					
6							110	110	110	110	110	110	110	110	110	120	120	120	120					
7							120	120	100	110	100	120	120	110	110	110	120	110	120					
8							120	120	120	120	110	110	120	120	120	110	120	120	120					
9							120	120	110	110	110	110	110	110	120	120	120	120	140					
10							120K	120	120	110	110	110	120	120	120	120	110	120	120					
11							120	120	120	120	110	120	120	120	110	120	110	120	120					
12								120	120	110	110	110	110	110	110	110	110	120	(110)					
13								120	120	120	110	110	110	110	110	120	120	110	120					
14								c	e	e	110	110	110	110	100	100	100	110	140					
15							140	120	110	110	120	120	110	110	110	110	110	110	110					
16							160	120	120	110	[110]c	[110]c	[110]e	[110]e	[110]e	[120]e	[120]e	[120]e	[150]e					
17								120K	110K	110K	110K	110K	110K	110K	110K	110K	120K	120K	110K					
18							110K	120K	120K	110K	110K	110K	100K	100K	100K	110K	120K	120K	130					
19							120	110	110	110	110	110	110	110	110	110	110	110	110					
20								110	110	110	110	110	110	110	110	110	120	120	120					
21							120	110	110	120	110	110	110	110	110	110	110	120	120					
22								120	120	110	110	110	110	110	110	110	110	120	(120)					
23								110	110	110	110	110	110	110	110	120	110	120	110					
24							150	120	110	110	110	110	110	110	110	110	110	120	100					
25								120	110	100	110	110	110	110	110	110	110	120						
26								110	110	120	110	110	110	100	[120]e	110	110	120						
27								120K	110K	120K	110K	110K	120K	110K	110K	120K	110	110	120					
28								120	110	110	110	110	110	100	110	100	110	110						
29								110	110	110	110	100	110	110	110	110	120	120						
30								110	120	120	120	110	110	110	110	110	110	120	120					
31																								
Sum																								
Median							120	120	110	110	110	110	110	110	110	110	110	120	120					

TABLE 76

IONOSPHERE DATA - 7

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of $f^{\circ}E$ in {Mc / Kc} for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75°W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	A	3.5	3.4	(3.4)	[3.4]^{A}	[3.2]^{C}	2.8	A					
2							C	A	A	A	A	3.4	A	A	(3.4)	3.2	A	C	C					
3							A	A	A	A	[3.4]^{A}	(3.4)	[3.5]^{A}	B	A	(3.4)	(3.3)	(2.7)	(2.0)					
4							(1.8)^{F}	(2.6)	(3.1)	(3.5)	A	A	B	(3.5)	(3.4)	3.4	3.3	(2.8)	A^{F}					
5							A	A	A	A	C	A	B	B	B	A	(3.3)	2.7	B					
6							A	(2.7)	3.3	3.4	3.4	(3.5)	(3.6)	3.5	3.5	(3.4)^{A}	3.3	(2.8)	(2.0)					
7							A	2.7	A	A	(3.5)	[3.5]^{A}	(3.5)	3.5	[3.5]^{B}	(3.5)	A	A	(1.8)					
8							(1.8)	(2.8)	A	A	A	(3.5)	(3.5)	B	B	3.4	A	A	A					
9							1.8	2.6	A	A	A	3.4	B	B	C	B	3.4	(2.8)	A					
10							1.4^{H}	(2.6)	[3.1]^{A}	[3.4]^{A}	(3.4)	3.4	[3.5]^{B}	(3.4)	(3.4)	(3.4)	[3.2]^{A}	2.6	A					
11							A	2.7	[3.2]^{A}	(3.3)	[3.4]^{A}	3.4	B	B	(3.4)	3.4	3.3	[2.9]^{B}	A					
12								A	A	[3.3]^{A}	[3.4]^{A}	(3.5)	A	A	A	3.3	(3.2)	(2.6)	(1.7)					
13								(2.4)	(3.1)	3.3	3.4	[3.4]^{A}	B	A	B	A	3.1	(2.6)	(1.4)					
14							C	C	C	C	A	A	C	(3.4)	[3.4]^{B}	[3.3]^{C}	[3.1]^{C}	(2.8)	(1.8)					
15							(1.5)	(2.6)	A	A	A	A	(3.4)	[3.4]^{B}	(3.4)	3.3	(3.1)	(2.7)	A					
16							1.6	(2.6)	[3.2]^{A}	3.3	[3.4]^{C}	[3.4]^{C}	C	C	C	[3.4]^{C}	[3.2]^{A}	[2.6]^{C}	[1.5]^{C}					
17								(2.6)$^{F}_{K}$	[3.0]$^{A}_{K}$	(3.3)^{K}	3.4^{K}	(3.4)^{K}	[3.4]$^{B}_{K}$	(3.4)^{K}	[3.3]$^{B}_{K}$	[3.3]$^{A}_{K}$	3.2^{K}	[2.5]$^{B}_{K}$	(1.8)^{A}					
18							A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	[3.4]$^{B}_{K}$	[3.5]$^{B}_{K}$	3.3^{K}	(3.3)^{K}	3.3^{K}	3.1^{K}	[2.4]$^{C}_{K}$	(1.6)					
19							A	(2.4)	(2.9)	[3.3]^{B}	3.4	3.4	3.4	3.5	(3.4)	3.4	3.0	2.6	A					
20								B	A	A	[3.4]^{B}	3.4	(3.4)	[3.4]^{B}	3.3	3.3	(3.1)	2.4	B					
21							A	A	A	A	(3.4)	(3.5)	[3.5]^{B}	3.5	3.4	(3.4)	(3.1)	[2.3]^{A}	B					
22								(2.6)	(3.1)	3.3	(3.5)	(3.5)	3.4	(3.5)	(3.3)	3.4	3.1	(2.9)	B					
23								(2.6)	3.0	[3.3]^{A}	3.4	(3.4)	B	B	B	B	(3.3)	A	A					
24							B	(2.6)	(3.1)	3.4	(3.4)	(3.4)	(3.4)	3.4	(3.5)	3.4	[3.3]^{B}	(2.5)	A					
25								(2.5)^{F}	(2.9)	3.4	A	B	B	(3.5)	(3.4)	(3.3)	(3.2)	(2.4)						
26								(2.4)	C	A	B	A	(3.5)	[3.4]^{B}	[3.4]^{C}	(3.4)	(3.1)	A						
27								(2.4)^{K}	(3.2)^{K}	3.4^{K}	B^{K}	B^{K}	(3.4)^{K}	(3.4)^{K}	A^{K}	A^{K}	A	A	B					
28								2.5	(2.9)	B	A	A	(3.4)	(3.4)	B	3.4	(3.2)	(2.5)						
29								2.5	A	A	A	(3.4)	A	3.5	C	B	(3.3)	2.3						
30							(1.5)	A	A	A	A	(3.4)	B	A	(3.4)	(3.3)	[3.0]^{A}	(2.3)						
31																								
Sum																								
Median							1.6	2.6	3.1	3.3	3.4	3.4	3.5	3.4	3.4	3.4	3.2	2.6	1.8					

TABLE 77

IONOSPHERE DATA - 8

Washington, D.C. Ionosphere Station
(Location)

National Bureau Of Standards
(Institution)

Hourly values of E_s in $\left\{\begin{matrix} Mc \\ km \end{matrix}\right.$ for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.8 110	2.8 110	2.6 120	2.7 120	3.4 110	3.2 110	4.3 110	4.6 120	5.7 110	4.3 120	4.3 110	4.6 110		4.1 120	3.7 140	5.9 120	4.3 120	3.4 120	2.6 120					2.7 120
2		3.8 120	4.5 110	4.6 110	3.0 110	2.8 110	4.7 120	3.6 120	4.1 120	4.2 120	4.7 120	4.2 120	3.6 120	3.8 120	4.1 140	3.8 130	3.6 120	C	3.2 120	2.7 120	3.3 110	2.3 120		2.6 120
3	1.4 110	2.7 120	2.7 120	3.3 110	3.4 110	2.0 120	4.0 110	4.4 110	4.3 110	4.4 120	3.6 110	3.7 110	3.9 110		4.2 110		4.0 130	3.3 110	3.3 110	3.2 110	2.7 110	3.2 100	2.6 110	2.6 110
4		2.5 120		1.0 140			2.7 120	(3.6) 110	4.1 110		5.9 110	4.5 130				3.7 120		2.6 120	2.7 110	2.8 120	2.8 110	2.8 100	2.6 120	2.6 110
5	2.5 120	2.6 100			8 120	2.6 120	3.2 110	3.6 120	5.4 120	6.4 110	5.5 120	4.6 110			4.7 110	4.0 110		2.7 120	2.6 110	(3.3) 100	2.8 110	2.7 110	2.6 110	2.7 120
6						2.7 130	4.0 110	4.0 120	4.0 110	3.6 140	4.2 110	4.3 110	4.1 120	4.0 120	4.3 120	3.9 120	3.6 140	3.5 130	2.8 120		3.0 110	3.4 110	3.4 110	2.9 110
7	2.7 110	1.0 110	C	1.0 110	C	C	3.4 120	4.0 120	4.8 100	4.5 110	4.1 120	4.1 110	4.0 110			4.2 110	4.0 120	(3.4) 110	3.2 140	1.0 120	3.3 120	3.7 110	2.6 120	2.7 110
8	2.7 100						2.7 120	2.8 120	4.8 120	4.7 110	4.6 110					4.2 120	4.3 120	3.6 120	2.3 120					
9						2.7 120	4.1 120	(5.2) 110	4.0 110	4.1 110	4.1 110				C			3.4 120	2.4 120	3.4 120	5.8 120	3.4 120	3.7 120	2.5 120
10	3.3 120	3.3 110	1.1 120	2.7 120	2.6 110	2.6 110	2.7 110	4.0 120	3.5 120	3.9 110		4.1 120		3.9 180		4.2 140	4.1 110	3.5 120	3.4 120	3.3 120	2.8 120	2.6 120		
11	2.7 110			(2.3) 120		3.5 110	3.5 120	4.1 120	4.0 120	4.3 110	4.6 120	4.1 110						2.8 140	2.8 120			2.6 120		
12	3.3 110	3.0 110	3.3 110	3.3 110	2.6 110	2.7 100	(2.9) 120	3.4 120	4.3 120	4.0 110	4.2 110	4.3 110	4.0 110	4.1 110	3.9 110		4.2 120	2.8 110	2.7 110				2.8 110	3.4 120
13		2.6 120		2.6 120	2.6 110	2.8 100	5.7 110	3.5 120	3.6 140	3.8 160		4.1 110	3.6 110	3.7 110	3.8 110	3.6 120		5.0 110	1.9 160			3.3 120	3.4 120	
14	C	C	C	C	C	C	C	C	C	L	5.3 110	C	8.4 110	C	(3.5) 100									
15	2.5 100	2.5 120	3.7 110	3.6 110	4.9 110	3.3 100	3.4 110	3.4 120	3.5 110	4.1 110	4.0 110	3.9 110						3.4 110	3.0 100	3.3 100				
16	2.5 100	3.8 100	2.6 100	2.7 100	2.8 110	2.7 100	2.6 140	3.7 120	3.9 120	4.0 110	C	C	3.8 110	C	4.1 110	3.8 120	3.6 120	3.4 120	C	C	C	L	C	L
17	C	C	C	C	2.6 100	2.8 120	3.0 120	3.3 120	(3.6) 110		5.5 110	3.6 120				3.8 110		2.7 110	2.7 110		3.3 120			L
18	2.6 150	2.9 120	4.0 120	3.8 120	5.2 120	3.3 110	5.7 110	3.9 110	5.7 110	6.4 110	4.0 110								2.6 120	2.7 120	2.6 100	2.7 110		4.2 110
19	4.8 110	3.4 110	4.2 110	3.9 110	3.9 110	3.9 110	4.1 110	3.1 110				3.9 150					3.9 110	2.6 110	3.1 110	3.2 120				
20				1.0 120				3.0 140	3.3 110	3.4 110				4.1 120					3.4 120	3.3 120			3.3 110	2.6 100
21	2.6 110	2.7 120	3.8 110	2.7 100	2.7 100	4.1 100	3.5 120	3.8 110	4.8 110	5.3 110					4.3 120			2.8 120				2.8 110	3.6 110	3.4 110
22	3.5 110	2.9 110	2.7 110	2.7 120	2.7 120	2.6 120	3.4 110	4.0 120	3.8 110	3.8 110	4.0 110	4.2 120		4.0 110				2.7 120				5.7 110	3.5 110	3.3 110
23	3.3 110			1.1 110	2.7 110	2.9 110	3.3 110	(3.3) 120	3.4 120	3.5 110				3.7 110				3.6 110	4.6 110	5.3 110				
24							4.1 140	3.9 130	3.7 140	4.3 110	4.1 120							3.3 100	3.4 100	3.2 110				
25				0.9 120		(1.9) 130	2.7 150	2.7 120			4.2 110			3.7 110		5.0 120			2.6 110	2.4 100	2.6 100	2.5 100		
26						2.7 100	2.5 100	4.1 110	3.6 110	3.8 120			4.3 120		C	4.2 120	3.6 120	3.4 120	2.7 120				3.2 110	(2.5) 110
27			2.7 110	2.7 110	0.9 110	3.8 120	3.5 120	2.9 120	3.6 110		4.1 110				4.1 110	3.9 120	3.6 110	2.8 110	2.1 120	3.8 120	(3.5) 120			
28	2.5 110	2.8 110	(2.6) 110	4.0 110	2.6 110	2.7 120	2.7 110	2.8 110		3.9 110	4.0 110	4.7 110	3.6 110					2.7 160	3.3 100	3.2 100	2.6 110			
29		1.5 110	1.1 110	1.0 110	1.0 110	2.5 110	2.5 150	4.0 110	4.2 110	4.0 110	4.1 110		3.9 110											
30	3.4 110	2.7 110	2.8 110	2.7 140	2.7 H 110	3.9 120	3.7 110	3.5 110	4.0 120	4.2 120	4.1 110			4.7 110		3.9 120	3.2 120	4.1 110		2.5 110			2.7 120	2.8 110
31																								
Sum																								
Median	2.5	2.6	1.1	2.6	2.6	2.7	3.4	3.6	4.0	4.0	4.1	3.9				3.5		2.8	2.7	2.5				2.5

TABLE 78

IONOSPHERE DATA- 9

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-MI500 for September (Month) 1945

Records measured by J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(2.3)	(2.4)F	(2.1)F	(2.0)F	(1.9)F	(2.1)F	2.3	2.2	2.3	2.1	2.2	2.0	(2.2)	2.0	2.0	2.0	2.1	(2.1)	2.4	2.1	2.1	2.2	2.0	2.4
2	(2.4)	(2.0)F	(1.9)F	(2.0)F	(2.2)F	C	(2.2)	(1.9)	(1.6)	2.0	2.0	2.0	2.1	1.9	2.0	2.0	2.0	C	C	2.1e	2.1	2.1	2.1F	2.2
3	2.1	(2.1)F	(2.1)F	(1.9)F	(2.0)F	(2.1)F	2.5	2.4	2.3	2.3	2.1	(2.2)	2.1	2.0	2.1	2.1	2.1	2.2	(2.1)	(2.2)	(2.1)	2.0	1.9	2.0
4	2.0	2.1	2.3	(2.3)F	(2.0)F	1.8	2.3	2.2	2.4	2.0	2.2	2.1	(2.1)	2.1	2.1	2.1	2.1	2.2	2.3	2.1	(2.2)F	(2.0)F	(2.1)F	(2.4)F
5	(2.3)F	(1.9)F	(2.0)F	(2.1)F	(2.2)F	(1.9)F	(2.4)F	2.1	2.3	2.0	C	2.0	2.1	(2.2)	2.1	2.2	2.1	(2.1)	2.3	(2.3)	2.1	2.1	(2.1)F	(2.0)F
6	(2.2)F	(2.1)F	(1.9)F	(1.9)F	(2.0)F	(2.0)F	(2.3)F	2.4	2.4	2.4	2.2	2.2	2.0	2.2	2.1	2.1	2.0	2.1	(2.1)	(2.1)	(2.2)	2.2	C	(2.1)F
7	(1.9)F	(2.2)	C	2.0	C	C	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	(2.1)	(2.2)	2.1	2.1	2.2	2.0	2.1	C	2.0	2.0
8	2.0	2.0	2.1	2.1	(2.2)	[2.0]F	2.3	2.4	2.4	2.3	(2.3)	2.3	(2.1)	(2.1)	(2.0)	C	2.2	2.3	(2.2)	(2.3)	(2.1)	2.2	2.0	2.0
9	2.0	2.0	2.2	2.2	(2.1)	(2.3)	2.3	2.3	2.2	2.2	(2.2)	(2.1)	2.0	(2.3)	(2.1)	(2.2)	(2.2)	2.0	(2.2)	(2.1)	(2.2)	2.2	2.1	2.3
10	2.0	2.3	(2.2)	(2.3)	(2.2)	2.1	2.4	2.4	2.2	2.2	2.2	C	(2.0)	(2.2)	(2.1)	2.1	2.0	(2.1)	(2.4)	(2.3)	2.0	2.0	2.1	2.0
11	1.9	2.0	(2.0)	(2.3)	2.0	2.6	2.3	2.4	2.3	(2.3)	(2.2)	(2.2)	2.0	2.1	(2.0)	(2.1)	(2.2)	(2.2)	(2.6)	(2.2)	2.1	2.1	2.0	1.9
12	(1.9)	1.9	2.1	2.0	(2.0)	(2.0)F	2.4	2.3	2.0	2.3	2.0	1.9	1.9	2.0	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.2
13	1.9F	(2.0)F	(1.9)F	(1.9)F	(1.9)F	(2.0)F	2.5	2.4	(2.3)	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.2	2.2	2.1	2.1	2.1F	(2.2)	(2.0)
14	C	C	C	C	C	C	C	C	C	C	2.3	2.2	C	C	2.1	(2.2)	2.2	2.2	2.3	(2.3)	2.2	2.1	2.1	2.0
15	2.1F	2.1F	1.9F	(2.1)F	(1.8)F	(1.9)	2.5	2.3	(2.3)	2.3	2.1	2.2	2.1	2.0	2.0	(2.1)	2.1	2.2	2.3	2.2	(2.1)	2.2	(2.2)	2.2
16	C	2.2	2.0F	(2.1)F	1.9	(2.0)F	2.4	2.4	2.3	2.1	C	C	C	C	C	C	2.0	C	C	C	C	C	C	C
17	1.8	C	CK	CK	(1.8)K	(1.9)FK	(2.2)K	GK	(1.9)K	2.0K	3K	(1.7)K	GK	GK	GK	1.8K	1.9K	(2.0)K	2.1K	2.1K	2.2K	2.0K	(1.8)K	CK
18	1.9K	1.8K	2.0K	(2.2)K	AK	(1.9)K	(2.0)K	(2.3)K	2.2K	(1.9)FK	(2.0)K	1.6K	(1.7)K	1.8K	1.9K	2.1K	2.0K	1.9K	2.2	2.1	1.9	1.8	1.9	(2.2)
19	A	1.8	(1.9)	1.9	(1.9)F	(2.1)F	2.3	2.2	(2.3)	(2.4)	(2.3)	2.1	2.1	2.0	2.1	2.1	(2.2)	2.1	(2.3)	(2.3)	2.3	2.3	(2.2)	2.1
20	1.9	1.9	1.8	1.9	2.0	2.1	(2.5)	2.5	2.4	2.3	2.1	2.2	(2.2)	(2.2)	2.3	2.3	2.3	2.3	2.4	2.2	2.1	2.1	(2.2)	(2.1)
21	2.1	2.0	2.0	2.1	(2.0)F	2.2F	2.5	2.4	2.4	2.2	2.3	(2.3)	(2.1)	(2.2)	2.4	2.3	2.3	(2.5)	2.4	2.3	2.0	2.1	2.1	(2.2)
22	A	2.1	(2.0)F	2.3	2.2F	(2.3)F	2.5	2.4	2.4	2.3	2.3	2.2	(2.2)	(2.2)	2.2	2.2	(2.3)	2.4	2.3	2.3	2.1	A	(1.9)	(2.1)
23	2.1	2.0	2.1	2.1	2.1	2.0F	(2.6)	2.4	2.3	2.3	(2.3)	2.1	(2.3)	2.2	2.2	(2.3)	(2.4)	(2.4)	(2.6)	2.5	(2.5)	C	2.2	2.2
24	2.2	(2.2)	2.1	2.1	2.2	2.2	2.5	2.5	2.6	2.4	2.2	2.2	2.0	2.1	(2.2)	2.1	(2.1)	(2.4)	2.2	2.2	2.2	2.1	(2.2)	2.2
25	2.1	2.1	2.2	2.2	2.1	2.1	2.5	(2.4)	2.3	2.3	(2.2)	(2.3)	(2.2)	(2.1)	(2.2)	(2.2)	(2.3)	(2.3)	(2.4)	2.3	2.3	2.1	2.0	2.0
26	2.0	2.1	2.0	2.3	2.0	2.0	(2.3)	2.3	2.2	2.3	2.2	2.2	2.1	(2.2)	C	(2.1)	2.1	(2.3)	2.3	2.2	2.1	2.0	2.0	1.9
27	2.1	2.0	(2.0)	(2.3)	2.1	2.1	2.3	2.4K	2.3K	2.1K	2.0K	2.1K	2.1K	2.0K	2.0K	2.0K	2.1	2.3	(2.4)	2.2	2.0	2.1	2.2	2.1
28	2.0	2.0	(2.2)	(2.2)	2.2	(2.0)	(2.4)	2.3	2.3	2.3	2.3	2.1	2.2	2.1	2.1	(2.1)	(2.3)	(2.3)	(2.3)	2.2	1.9	2.2	2.2	(2.0)F
29	2.2F	2.0	2.0	2.3	(2.4)	(2.4)	2.4	2.4	2.4	2.2	(2.3)	(2.2)	(2.1)	(2.1)	(2.2)	(2.3)	(2.3)	(2.4)	(2.4)	2.2	C	(2.0)	1.9	1.9
30	1.9	2.0	2.0	2.0	(1.7)	2.2	2.5	2.2	2.5	2.4	2.2	2.1	(2.0)	(2.2)	(2.2)	(2.2)	2.2	(2.4)	(2.4)	C	2.0	2.0	1.9	2.0
31																								
Sum																								
Median	2.0	2.0	2.0	2.1	2.0	2.1	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.0

TABLE 79

IONOSPHERE DATA- 10

Washington, D. C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F2-M3000 for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(3.4)	(3.4)^F	(3.1)^F	(3.0)^F	(2.9)^F	(3.1)^F	3.3	3.3	3.3	3.1	3.2	2.9	(3.2)	3.0	3.0	2.9	3.1	(3.1)	(3.5)	3.1	3.1	3.2	3.0	3.5
2	(3.4)	(3.0)^F	(2.9)^F	(3.0)^F	(3.2)^F	C	(3.3)	(2.9)	(2.4)	3.0	3.0	3.0	3.1	2.9	2.9	3.0	3.0	C	C	3.1	3.0	3.1	3.1^F	3.3
3	3.1	(3.1)^F	(3.1)^F	(2.8)^F	(2.9)^F	(2.9)^F	3.5	3.4	3.3	3.3	3.1	(3.3)	3.1	3.0	3.1	3.1	3.1	3.2	(3.1)	(3.2)	(3.1)	3.0	2.9	2.9
4	3.0	3.1	3.3	(3.0)^F	(3.0)^F	2.7	3.3	3.2	3.5	2.9	3.2	3.1	(3.1)	3.1	3.1	3.1	3.1	3.3	3.4	3.1	(3.2)^F	(3.0)^F	(3.1)^F	(3.2)^F
5	(3.3)^F	(2.9)^F	(3.0)^F	(3.1)^F	(3.3)^F	(2.9)^F	(3.4)^F	3.1	3.3	3.0	C	3.0	3.1	(3.2)	3.1	3.2	3.1	(3.1)	3.3	(3.3)	3.1	3.1	(3.1)^F	(3.0)^F
6	(3.2)^F	(3.1)^F	(2.8)^F	(2.9)^F	(3.0)^F	(3.0)^F	(3.3)^F	3.4	3.4	3.5	3.3	3.3	3.0	3.3	3.1	3.1	3.0	3.1	(3.1)	(3.1)	(3.2)	3.3	C	(3.1)^F
7	(2.9)^F	(3.2)	C	3.0	C	C	3.5	3.4	3.4	3.4	3.2	3.3	3.2	3.1	(3.1)	(3.2)	3.1	3.1	3.3	3.0	3.1	C	2.9	3.0
8	3.0	3.0	3.1	3.1	(3.2)	(3.0)^F	3.3	3.4	3.4	3.3	(3.3)	3.3	(3.2)	(3.1)	(3.0)	C	3.2	3.3	(3.2)	(3.3)	(3.1)	3.2	3.0	3.0
9	3.0	3.0	3.3	3.2	(3.1)	(3.3)	3.3	3.3	3.3	3.2	(3.2)	(3.1)	3.0	(3.4)	(3.1)	(3.3)	(3.2)	3.0	(3.2)	(3.1)	(3.2)	3.2	3.1	3.0
10	3.0	3.3	(3.2)	(3.3)	(3.2)	3.1	3.4	3.4	3.3	3.2	3.2	C	(3.0)	(3.2)	(3.1)	3.1	2.9	(3.1)	(3.4)	(3.4)	3.0	3.1	3.1	2.9
11	2.9	3.0	(3.0)	(3.3)	2.9	(3.5)	3.3	3.4	3.3	(3.4)	(3.2)	(3.2)	3.0	3.0	(3.0)	(3.1)	(3.2)	(3.2)	(3.6)	(3.2)	3.0	3.0	3.0	2.8
12	(2.8)	2.9	3.1	3.0	(3.0)	(2.9)^F	3.5	3.3	2.9	3.3	3.0	2.9	2.9	2.9	3.1	3.0	3.0	3.1	3.1	3.1	3.1	3.0	3.1	3.2
13	2.9^F	(3.0)^F	(2.9)^F	(2.8)^F	(2.9)^F	(2.9)^F	3.5	3.5	(3.3)	3.0	3.0	2.9	2.9	2.9	2.9	2.9	3.0	3.2	3.1	3.0	3.0	3.1^F	(3.2)	(3.0)
14	C	C	C	C	C	C	C	C	C	C	3.3	3.2	C	C	3.2	(3.3)	3.2	3.2	3.3	(3.3)	3.3	3.1	3.0	3.0
15	3.0^F	3.1^F	2.9^F	(3.2)^F	(2.8)^F	(2.9)	3.5	3.4	(3.3)	3.3	3.2	3.2	3.1	2.9	3.0	(3.0)	3.1	3.2	3.3	3.2	(3.2)	3.2	(3.2)	3.2
16	C	3.2	3.0^F	(3.1)^F	2.9	(3.0)^F	3.4	3.4	3.3	3.1	C	C	C	C	C	C	2.9	C	C	C	C	C	C	C
17	2.7	C	C^K	C^K	(2.7)^K	(2.8)^K_F	(3.2)^K	G^K	(2.9)^K	2.9^K	G^K	(2.6)^K	G^K	G^K	G^K	2.7^K	2.9^K	(3.0)^K	3.0^K	3.1^K	3.2^K	3.0^K	(2.8)^K	C^K
18	2.8^K	2.8^K	3.0^K	(3.2)^K	A^K	(2.9)^K	(2.9)^K	(3.4)^K	3.2^K	(2.9)^K_F	(2.9)^K	2.5^K	(2.6)^K	2.8^K	2.8^K	3.1^K	3.0^K	2.8^K	3.2	3.0	2.9	2.8	2.9	(3.2)
19	A	2.7	(2.8)	2.8	(2.9)^F	(3.1)^F	3.3	3.2	(3.3)	(3.3)	(3.3)	3.1	3.1	3.0	3.1	3.1	(3.1)	3.1	(3.3)	(3.4)	3.3	3.3	(3.2)	3.0
20	2.9	2.8	2.8	2.9	3.0	3.1	(3.6)	3.6	3.5	3.3	3.1	3.2	(3.3)	(3.2)	3.3	3.3	3.3	3.3	3.4	3.2	3.0	3.1	(3.2)	(3.1)
21	3.1	3.0	3.0	3.1	(3.0)^F	3.2^F	3.6	3.5	3.4	3.2	3.4	(3.3)	(3.1)	(3.2)	3.4	3.3	3.3	(3.6)	3.4	3.3	3.0	3.1	3.0	(3.2)
22	A	3.0	(3.0)^F	3.3	3.2^F	(3.3)^F	3.5	3.4	3.4	3.3	3.4	3.2	(3.3)	(3.2)	3.2	3.2	(3.3)	3.4	3.4	3.4	3.1	A	(2.9)	(3.1)
23	3.2	3.0	3.1	3.1	3.1	3.0^F	(3.7)	3.5	3.4	3.3	(3.3)	3.1	(3.3)	3.2	3.2	(3.3)	(3.3)	(3.4)	(3.6)	3.6	(3.5)	C	3.2	3.2
24	3.2	(3.3)	3.1	3.1	3.2	3.2	3.5	3.5	3.6	3.4	3.2	3.2	3.0	3.0	(3.3)	3.1	(3.1)	(3.4)	3.2	3.2	3.2	3.1	(3.2)	3.2
25	3.1	3.1	3.2	3.2	3.1	3.1	3.5	(3.4)	3.3	3.2	(3.2)	(3.3)	(3.2)	(3.1)	(3.2)	(3.2)	(3.3)	(3.3)	(3.4)	3.3	3.3	3.1	2.9	3.1
26	2.9	3.1	3.0	3.3	3.0	3.0	(3.3)	3.3	3.2	3.3	3.2	3.2	3.1	(3.2)	C	(3.1)	3.1	(3.3)	3.3	3.2	3.1	3.0	3.0	2.8
27	3.1	2.9	(2.9)	(3.3)	3.1	3.1	3.4	3.4^K	3.3^K	3.1^K	3.0^K	3.1^K	3.0^K	2.9^K	3.0^K	3.0^K	3.0	3.3	(3.4)	3.2	3.0	3.1	3.2	3.1
28	3.0	2.9	(3.3)	(3.2)	3.2	(3.0)	(3.4)	3.4	3.3	3.2	3.3	3.1	3.3	3.1	3.1	(3.0)	(3.3)	(3.3)	(3.3)	3.2	2.9	3.3	3.2	(3.0)^F
29	3.2^F	3.0	3.0	3.3	(3.4)	(3.4)	3.5	3.4	3.4	3.2	(3.3)	(3.1)	(3.1)	(3.1)	(3.2)	(3.3)	(3.3)	(3.4)	(3.4)	3.2	C	(3.0)	2.9	2.9
30	2.9	2.9	3.0	3.0	(2.7)	3.2	3.5	3.2	3.5	3.4	3.2	3.1	(3.0)	(3.2)	(3.2)	(3.2)	3.2	(3.4)	(3.4)	C	3.0	3.0	2.9	3.0
31																								
Sum																								
Median	3.0	3.0	3.0	3.1	3.0	3.0	3.4	3.4	3.3	3.2	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.3	3.2	3.1	3.1	3.0	3.0

TABLE 80

IONOSPHERE DATA - II

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of F1 - M3000 for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1								3.9	A	3.7	(3.7)H	3.7	3.9	3.8	3.7	3.5	(3.4)	A						
2								3.6	3.6	3.7	3.6	3.6	3.7	3.6	3.7	3.5	A	C						
3								A	A	3.6	3.8	3.8H	3.8	3.7	3.6	3.3	3.6	(3.9)						
4								(3.8)	(3.9)	3.6	3.7	3.8	3.7	3.5	3.6	3.5	3.6	3.8						
5								3.9	A	3.6	C	3.7	3.7	3.6	3.5	3.6	3.8	L						
6								(3.9)	3.6	3.6	3.9	3.8	3.7	3.7	3.6	3.6	L	L						
7								L	(3.6)	3.7	3.9	3.8	3.6H	3.6	3.6	3.5	(3.7)	L						
8								L	A	3.6	3.8	3.9	C	(3.6)	(3.6)H	3.7	L	A						
9								L	L	3.7	3.8	3.7	3.7	3.7	C	3.6	(3.7)	A						
10								L	L	3.6	3.6	3.7	3.6	3.7	3.9	3.5	A	L						
11								(3.9)	A	3.8	3.7	3.6	3.5	3.5	L	3.4	(3.6)	~						
12								L	L	3.6	3.7	3.7	3.6	3.6	3.4	3.5	3.3	L						
13								3.9	(3.8)	3.5	3.7	3.7	3.7	3.5	3.6	3.5	3.4	3.7						
14								C	C	C	A	3.6	C	C	3.8	C	L	L						
15								(3.7)	C	3.8	3.6	3.9	3.7H	3.6	3.7	3.6	L	3.8						
16								3.8	3.5	3.7	C	C	C	C	C	C	3.5	C						
17								3.7K	(3.5)K	3.8K	3.9K	(3.8)K	3.7K	3.5K	3.5K	3.0K	3.0K	CK	LK					
18								(3.8)K	(3.6)HK	3.7K	3.7K	3.5K	(3.8)K	3.3K	3.5K	3.6K	3.4K	CK						
19								(4.0)	3.6	(3.7)	(3.9)	3.8H	4.1	3.6	3.5	3.4	(3.6)	3.8						
20								C	L	3.7	3.7	3.7	3.7	3.5H	3.5	3.6	3.6	L						
21									A	(3.8)	3.7	3.6	(3.3)H	3.6	3.6	3.6	L							
22									L	L	3.5	3.7	(3.5)H	3.8	3.6	3.7	(3.8)	L						
23									L	(3.7)	3.7	(3.5)	(3.6)	3.6	3.0	L	L	A						
24									L	(3.5)	(3.7)	(3.8)H	(3.4)	3.7	(3.6)	(3.5)	L							
25								L	L	3.6	3.8	(4.0)	3.8	(3.5)	3.6	L	L	L						
26								L	L	3.5	3.6	4.1	3.7	3.6	C	3.5	L							
27								(3.9)K	(3.6)K	3.5K	3.6K	(3.6)K	3.6K	3.6K	3.7K	3.4K	(3.5)	L						
28								L	L	L	(3.6)	L H	(3.8)H	3.5	3.5	3.5	L							
29								L	L	L	3.7	3.7	3.6	3.5	C	L	L							
30								L	L	C	(3.6)	L	(3.5)	3.5	(3.4)	(3.4)	L	L						
31																								
Sum																								
Median								3.9	3.6	3.7	3.7	3.7	3.7	3.6	3.6	3.5	3.6	3.8						

TABLE 81

IONOSPHERE DATA-12

Washington, D.C. (Location) Ionosphere Station

National Bureau Of Standards (Institution)

Hourly values of E-MI500 for September (Month) 1945

Records measured by: J.M.C. K.W.S.

TIME: 75° W MERIDIAN

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1							A	A	A	A	A	A	43	43	(43)	A	C	3.7	A					
2							C	A	A	A	A	43	A	A	(4.1)	40	A	C	C					
3							A	A	A	A	A	(4.6)	A	B	A	43	(43)	A	A					
4							(4.0)^{F}	(4.0)	(4.2)	43	A	A	B	(4.4)	(4.4)	4.1	4.1	(4.0)	A^{F}					
5							A	A	A	A	C	A	B	B	B	A	(4.0)	3.9	B					
6							A	(3.8)	4.1	4.2	4.1	(43)	(4.2)	4.2	(4.2)	A	4.1	(3.8)	(4.0)					
7							A	A	A	A	(43)	A	4.2	43	B	(4.1)	A	A	A					
8							3.6	(3.8)	A	A	A	4.1	4.1	B	B	4.2	A	A	A					
9							A	A	A	A	A	43	B	B	C	B	4.1	(3.8)	A					
10							4.0^{H}	(3.9)	A	A	(43)	4.2	B	43	(43)	(4.1)	A	A	A					
11							A	(4.1)	A	(43)	A	4.5	B	B	(4.2)	43	4.1	B	A					
12								A	A	A	A	(4.2)	A	A	A	4.1	A	(4.0)	(3.7)					
13								A	(3.9)	4.0	4.1	A	B	A	B	A	4.0	(4.0)	(4.3)					
14							C	C	C	C	A	A	C	43	B	C	C	(3.6)	(3.4)					
15							(3.7)	A	A	A	A	A	(4.4)	B	(4.2)	4.2	(3.9)	(3.8)	A					
16							3.2	(3.4)	A	(4.3)	C	C	C	C	C	C	A	C	C					
17								(3.8)^{K}	A^{K}	(43)^{K}	4.2^{K}	(4.1)^{K}	B^{K}	(4.2)^{K}	B^{K}	A^{K}	4.1^{K}	B^{K}	(4.0)^{K}					
18							A^{K}	A^{K}	A^{K}	A^{K}	A^{K}	B^{K}	B^{K}	4.2^{K}	(43)^{K}	4.1^{K}	39^{K}	C^{K}	(3.5)					
19							A	(4.0)	(4.0)	B	4.1	43	43	4.0	(4.1)	4.2	40	(43)	A					
20								B	A	A	B	44	(43)	B	4.2	4.1	(3.9)	3.9	B					
21							A	A	A	A	(4.2)	(4.2)	B	(4.5)	4.2	(4.2)	(3.9)	A	B					
22								(3.7)	(3.9)	4.2	(4.1)	(4.1)	4.2	(4.2)	(4.2)	4.1	4.1	(4.0)	B					
23								(3.9)	(4.1)	A	4.2	(4.3)	B	B	B	B	(4.1)	A	A					
24							B	(3.8)	(4.1)	4.2	(4.2)	(4.3)	(4.2)	4.3	(4.2)	4.1	B	(4.1)	A					
25								(3.4)^{F}	(3.9)	4.3	A	B	B	(4.2)	(4.2)	(4.1)	(4.0)	(3.9)						
26								(4.0)	C	A	B	A	(4.2)	B	C	(4.2)	(4.2)	A						
27								(3.8)^{K}	(4.0)^{K}	4.2^{K}	B^{K}	B^{K}	(4.5)^{K}	(4.4)^{K}	A^{K}	A^{K}	A	A	B					
28								(3.7)	(3.9)	B	A	A	(4.5)	(4.5)	B	4.2	(4.1)	(4.0)						
29								(4.1)	A	A	A	(4.5)	A	4.2	C	B	(3.9)	(3.8)						
30							(3.8)	A	A	A	A	(4.3)	B	A	(4.4)	(4.2)	A	(3.9)						
31																								
Sum																								
Median							3.8	3.8	4.0	4.2	4.2	4.3	4.2	4.3	4.2	4.1	4.1	3.9	3.8					

Table 82

Ionospheric Storminess, September 1945

Day	Ionospheric Character* 00-12 GCT	12-24 GCT	Principal Storms Beginning GCT	End GCT	Geomagnetic Character** 00-12 GCT	12-24 GCT
September						
1	1	2			1	2
2	2	3			2	1
3	2	1			1	1
4	2	1			3	2
5	1	3			2	2
6	2	1			2	1
7	1	1			2	1
8	0	0			0	2
9	1	3			1	0
10	1	1			1	1
11	2	1			1	3
12	2	3			3	1
13	2	3			2	2
14	***	1			1	1
15	2	3			1	1
16	1	2			1	2
17	2	6	0700	——/	4	4
18	4	5	——	2300	3	4
19	3	2			3	1
20	2	1			2	1
21	2	1			1	2
22	1	1			1	1
23	1	1			0	0
24	1	1			0	1
25	2	1			2	2
26	1	2			1	2
27	1	4	1200	2100	2	2
28	2	3			2	1
29	1	1			1	1
30	1	1			3	2

*Ionosphere character figure (I-figure) for ionospheric storminess at Washington, D.C., during 12-hour period, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

**Average for 12 hours of American magnetic K-figure, determined by a number of observatories, on an arbitrary scale of 0 to 9, 9 representing the greatest disturbance.

***No readable record.

/Dashes indicate continuing storm.

Table 83

Sudden Ionosphere Disturbances Observed

at Washington, D.C.

Day	GCT Beginning	GCT End	Locations of transmitters	Relative intensity at minimum*
September				
3	1959	2045	Ohio, D.C., England, Mexico, Brazil.	0.1
26	1917	2000	Ohio, D.C., England, Mexico, Brazil.	0.1

*Ratio of received field intensity during SID to average field intensity before, and after, for station WBXAL, 6080 kilocycles, 600 kilometers distant.

Table 34

Provisional Radio Propagation Quality Figures
August 1945
Compared with IRPL and ISIB Warnings and IRPL A-Zone Forecasts.

Day	North Atlantic								North Pacific					
	Quality Figure		IRPL Warning		ISIB Warning		A-Zone Forecast	Geomagnetic K_A	Quality Figure		IRPL Warning		A-Zone Forecast	Geomagnetic K_A
	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT		01-12 GCT / 13-24 GCT	01-12 GCT	13-24 GCT	01-12 GCT	13-24 GCT		01-12 GCT / 13-24 GCT
1	6	6					5	1 2	7	7			5	1 2
2	(4)	6	X	X			(4)	3 2	6	6	X	X	(4)	3 2
3	5	7	X	X			5	2 2	7	7	X	X	5	2 2
4	6	6					5	2 1	7	7			5	2 1
5	5	7					6	2 2	7	7			6	2 2
6	6	7					6	2 1	7	7			6	2 1
7	6	7					7	1 1	8	7			7	1 1
8	6	7					7	1 2	7	8			7	1 2
9	6	7					6	1 1	7	7			6	1 1
10	6	7					7	1 1	8	7			7	1 1
11	6	7					7	1 2	7	7			7	1 2
12	6	7					6	2 1	7	6			6	2 1
13	5	6					5	2 2	7	6			5	2 2
14	(4)	5		X			5	3 2	6	6		X	5	3 2
15	6	7	X	X			6	2 2	6	7	X	X	6	2 2
16	6	7					6	2 1	7	7			6	2 1
17	6	6					6	1 1	7	6			6	1 1
18	6	6					6	1 1	8	7			6	1 1
19	6	7					5	1 1	8	7			5	1 1
20	5	7					5	1 1	8	7			5	1 1
21	6	7					6	2 2	7	6			6	2 2
22	6	7					6	1 3	7	7			6	1 3
23	(4)	5					6	3 1	7	7			6	3 1
24	5	7	X	X			5	1 0	7	7	X	X	5	1 0
25	6	7					5	1 0	8	7			5	1 0
26	6	7					5	1 1	7	7			5	1 1
27	6	7					5	1 2	7	6			5	1 2
28	(4)	6	X	X			(4)	4 2	6	6	X	X	(4)	4 2
29	6	7	X	X			(4)	2 1	6	7	X	X	(4)	2 1
30	6	7	X	X			5	0 1	6	5	X	X	5	0 1
31	5	7					6	1 1	7	7			6	1 1
Score:														
H			2		0		2				0		0	
M			2		4		2				0		0	
G			22		27		26				23		28	
(S)			2		0		0				1		0	
S			3		0		1				7		3	

Quality Figure and Forecast Scale:
1 = Useless
2 = Very poor
3 = Poor
4 = Poor to fair
5 = Fair
6 = Fair to good
7 = Good
8 = Very good
9 = Excellent

Symbols
X = Warning given.
H = Quality 4 or worse on day or half-day following warning.
M = Quality 4 or worse on day or half-day following no warning.
G = Quality 5 or better on day following no warning.
(S)= Quality 5 on day following warning.
S = Quality 6 or better on day following warning.
( )= Quality or forecast 4 or worse (disturbed).

Geomagnetic K_A on the standard scale of 0 to 9, 9 representing the greatest disturbance.

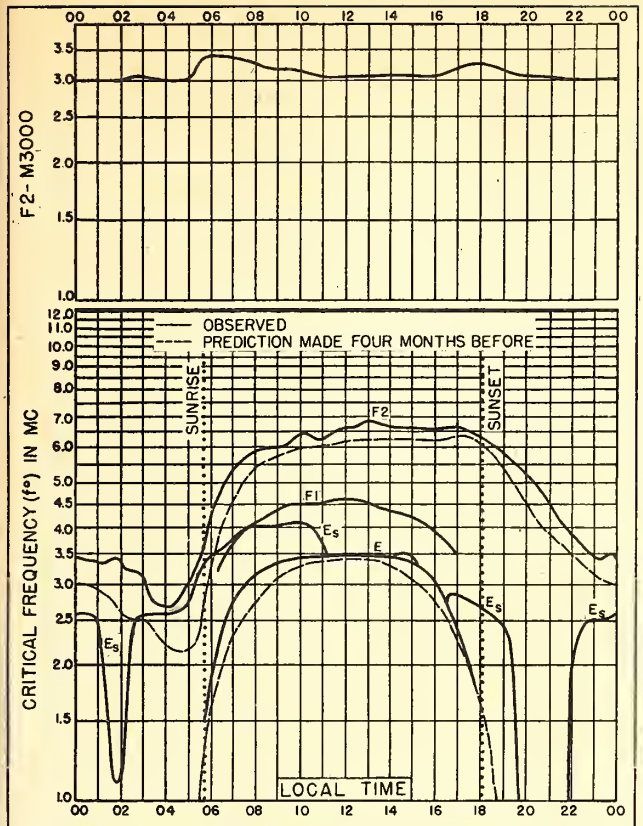

Fig. 1. WASHINGTON, D.C.
39.0°N, 77.5°W SEPTEMBER, 1945

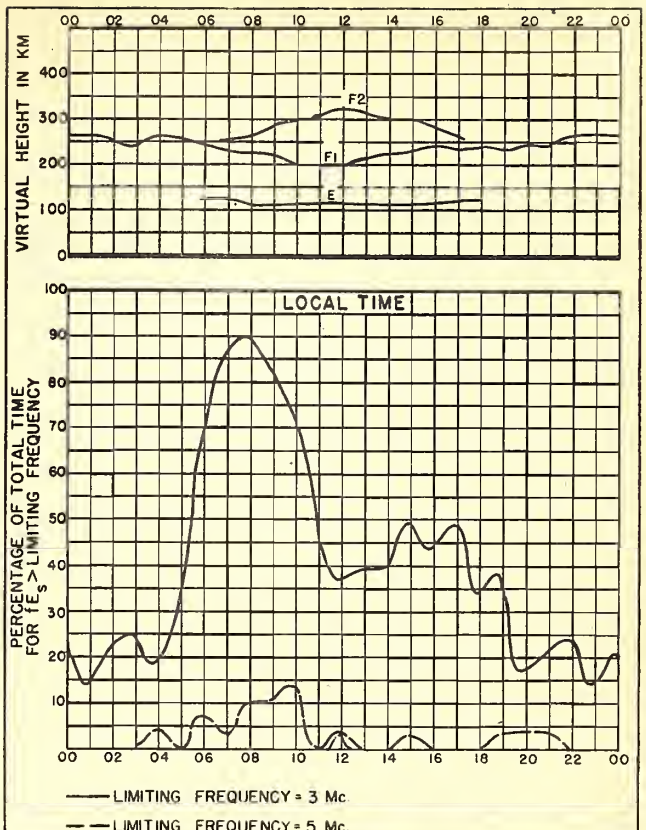

Fig 2 WASHINGTON, D.C. SEPTEMBER, 1945

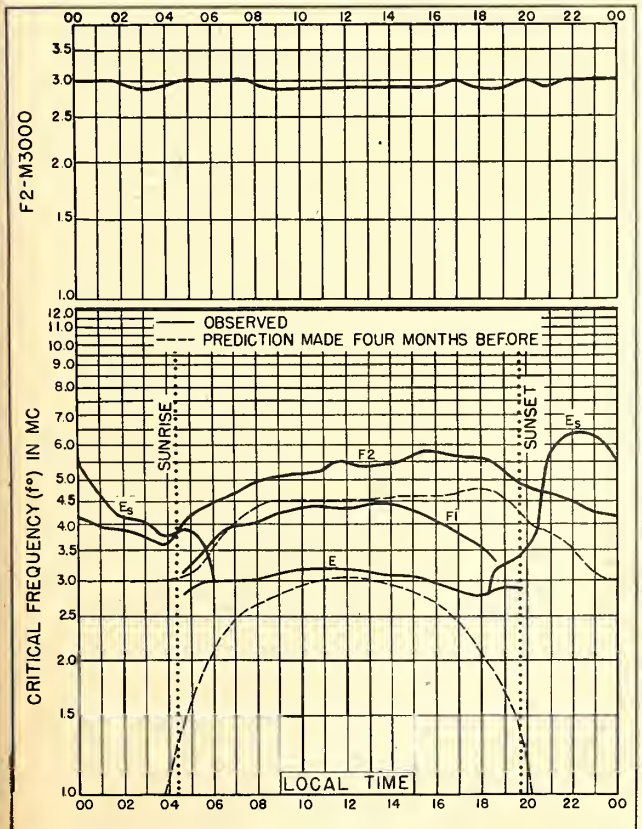

Fig. 3. CHURCHILL, CANADA
58.8°N, 94.2°W AUGUST, 1945.

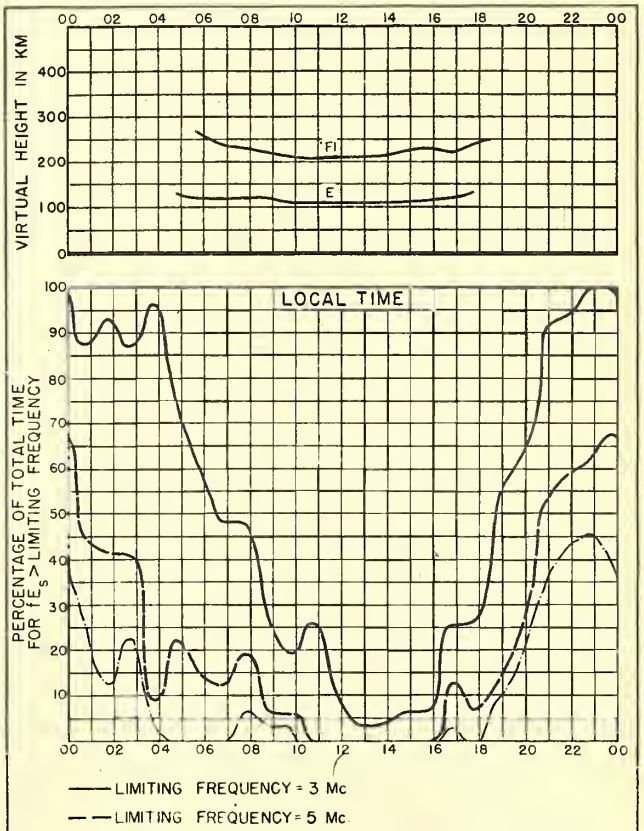

Fig. 4. CHURCHILL, CANADA AUGUST, 1945.

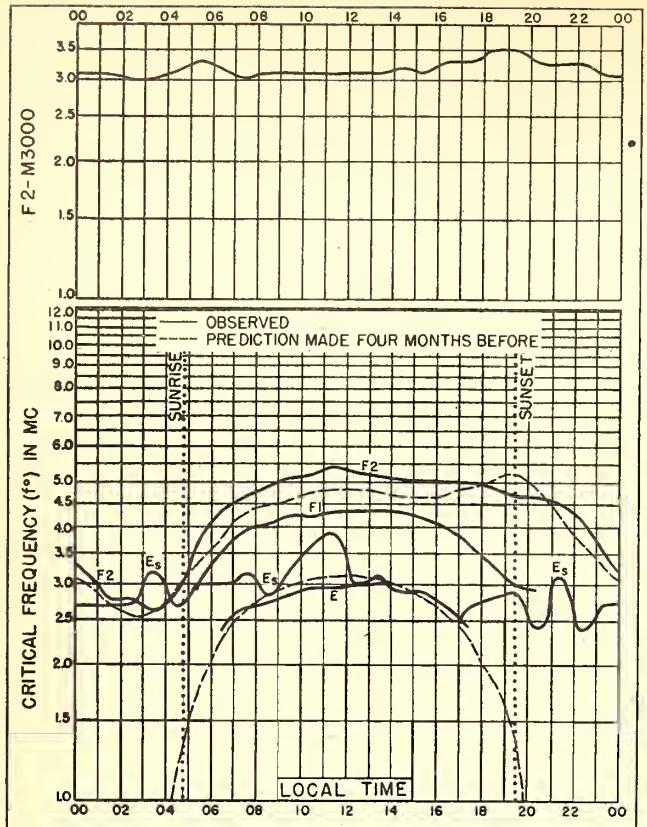

Fig. 5. PRINCE RUPERT, CANADA.
54.3°N, 130.3° W. AUGUST, 1945

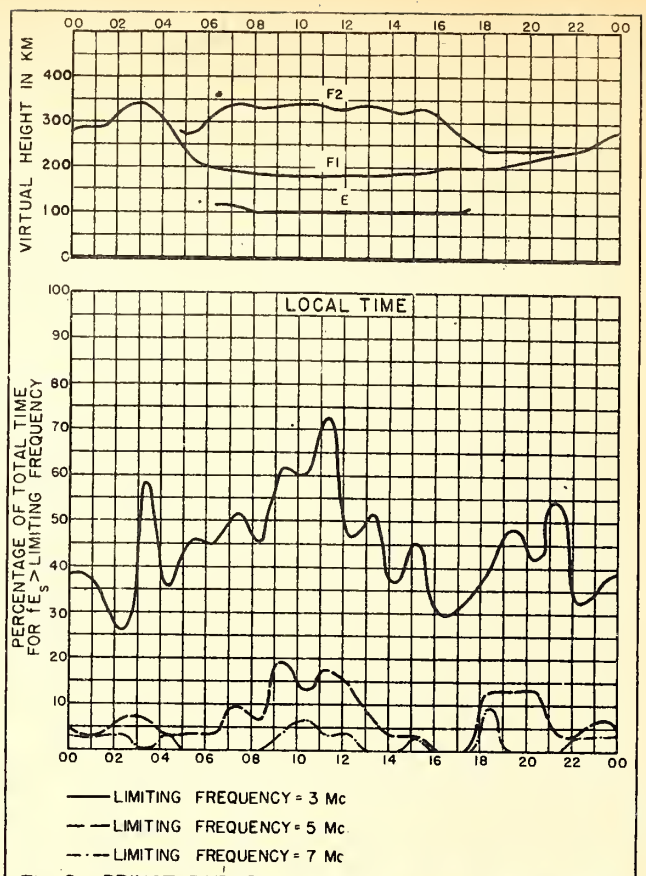

Fig. 6. PRINCE RUPERT, CANADA. AUGUST, 1945.

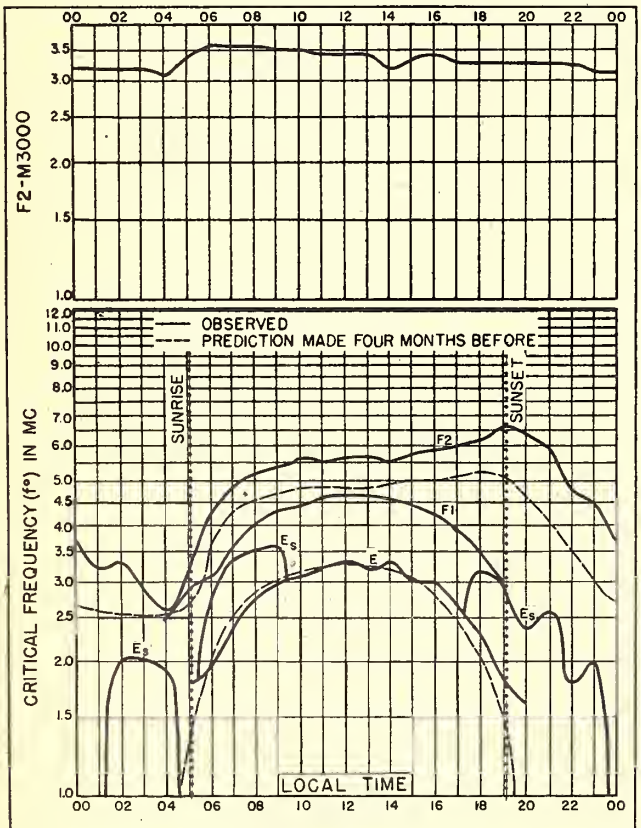

Fig. 7. ST. JOHN S, NEWFOUNDLAND
47.7°N, 52.7°W. AUGUST, 1945

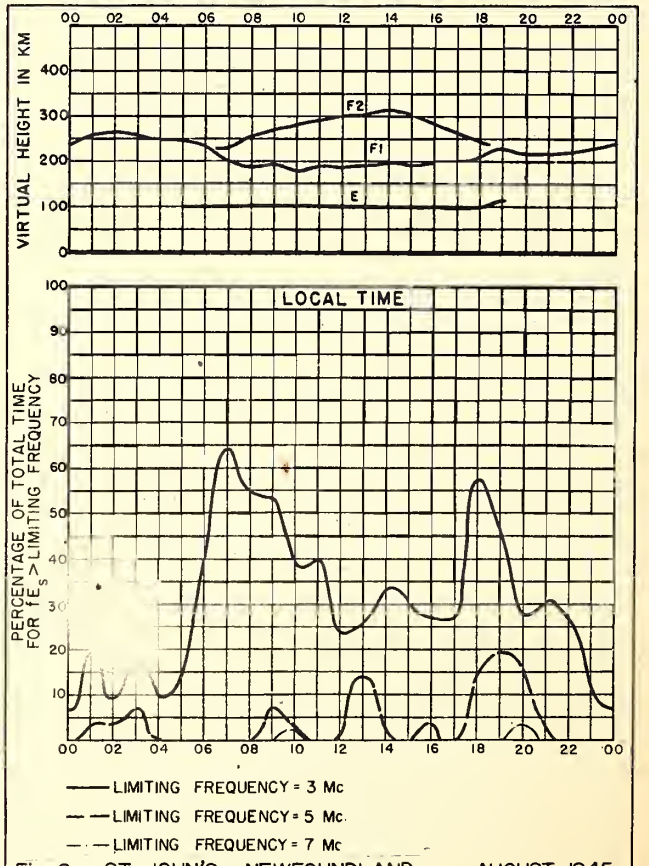

Fig. 8. ST. JOHN'S, NEWFOUNDLAND AUGUST, 1945

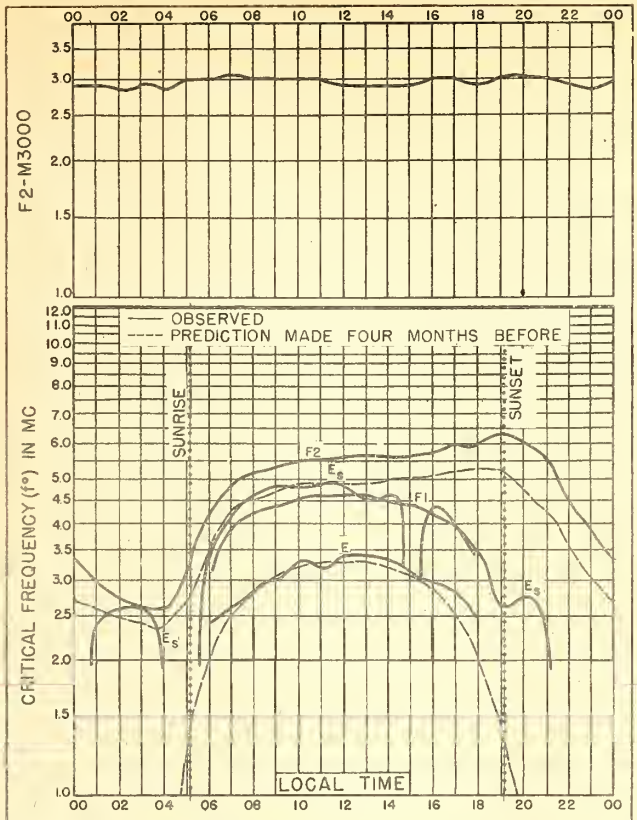

Fig. 9. OTTAWA, CANADA
45.5° N, 75.8° W
AUGUST, 1945.

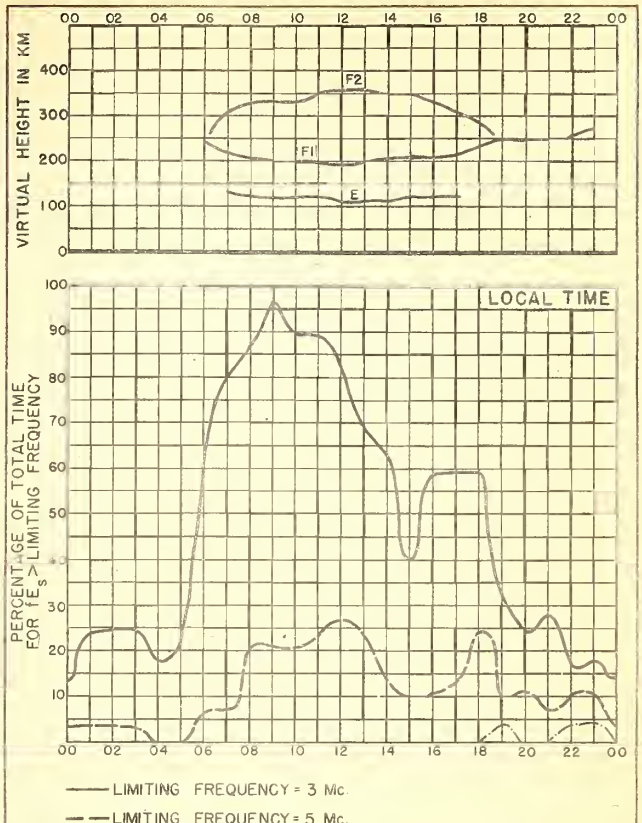

Fig. 10. OTTAWA, CANADA
AUGUST, 1945.

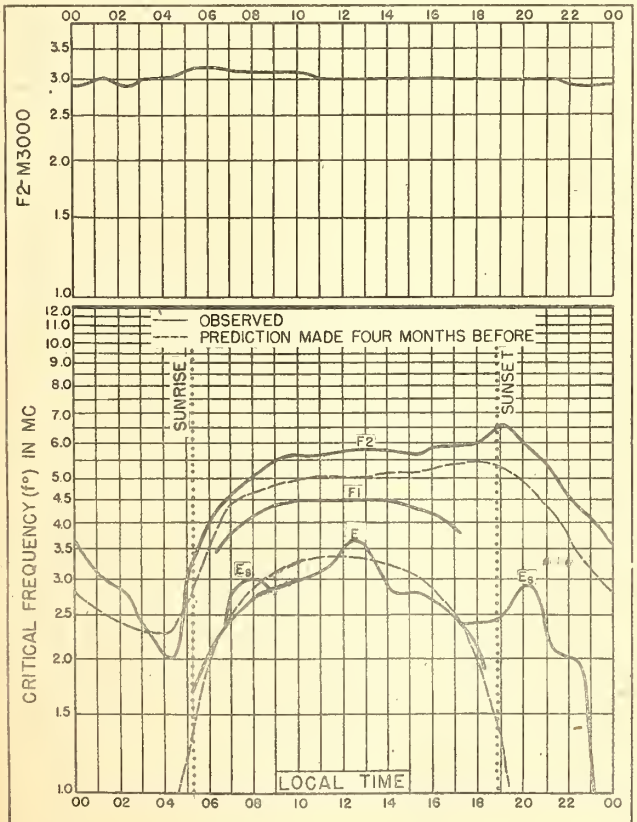

Fig. 11. BOSTON, MASSACHUSETTS
42.4° N, 71.2° W
AUGUST, 1945.

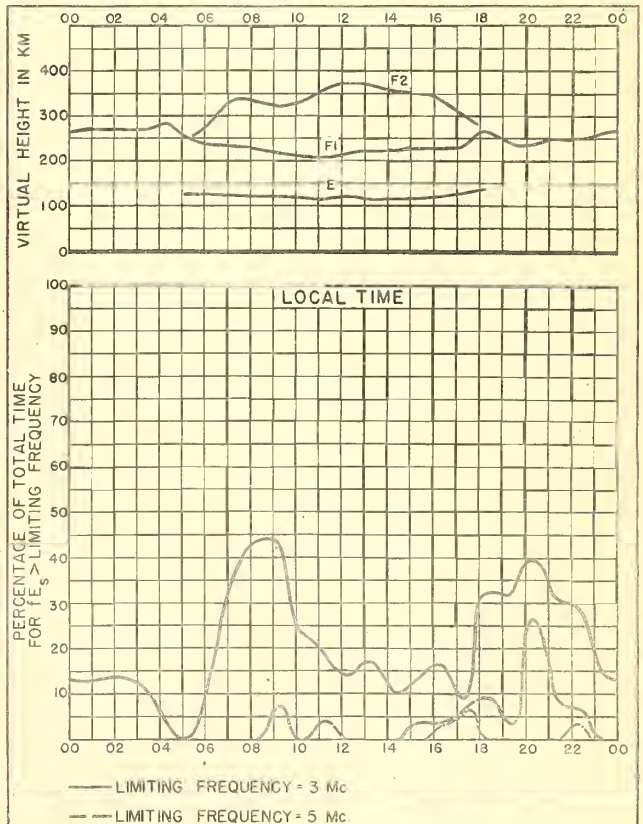

Fig. 12. BOSTON, MASSACHUSETTS
AUGUST, 1945

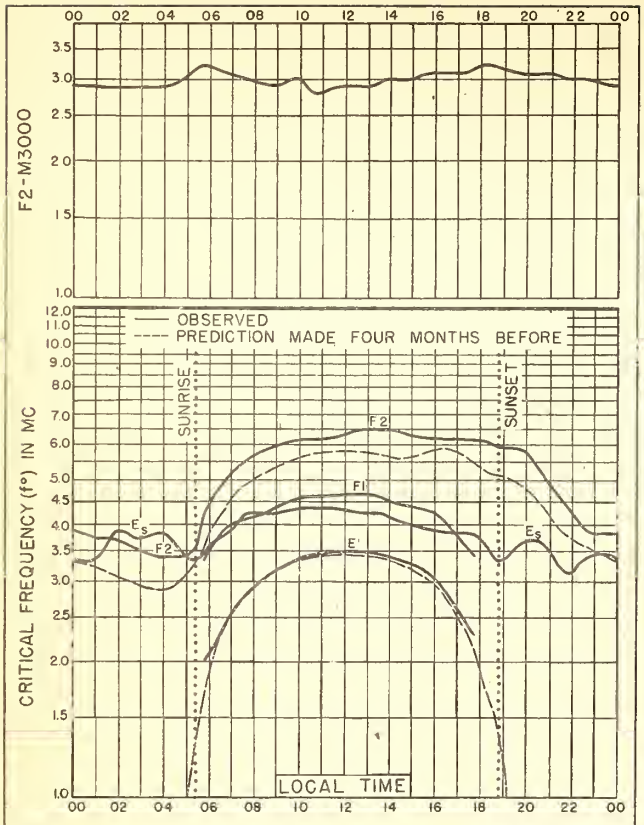

Fig. 13. SAN FRANCISCO, CALIFORNIA
37.4°N, 122.2°W AUGUST, 1945

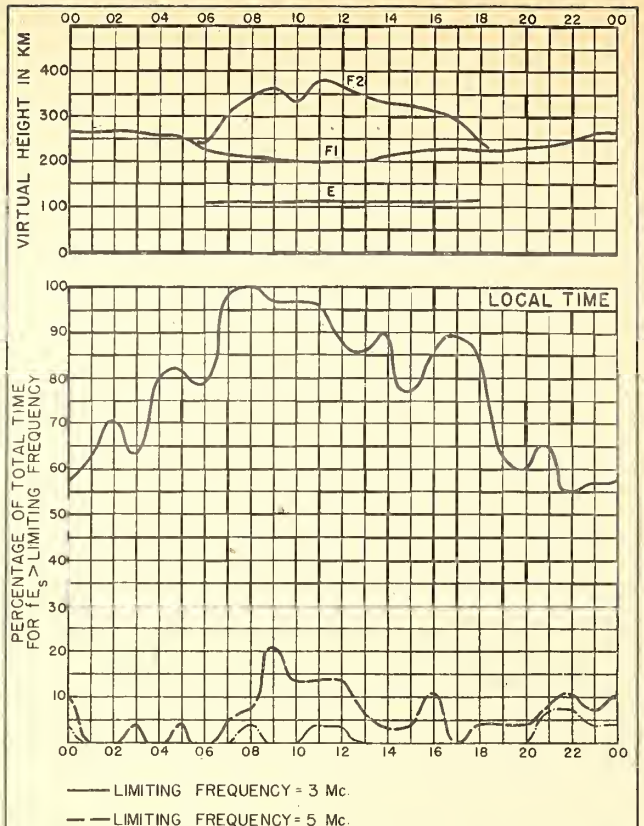

Fig. 14. SAN FRANCISCO, CALIFORNIA AUGUST, 1945.

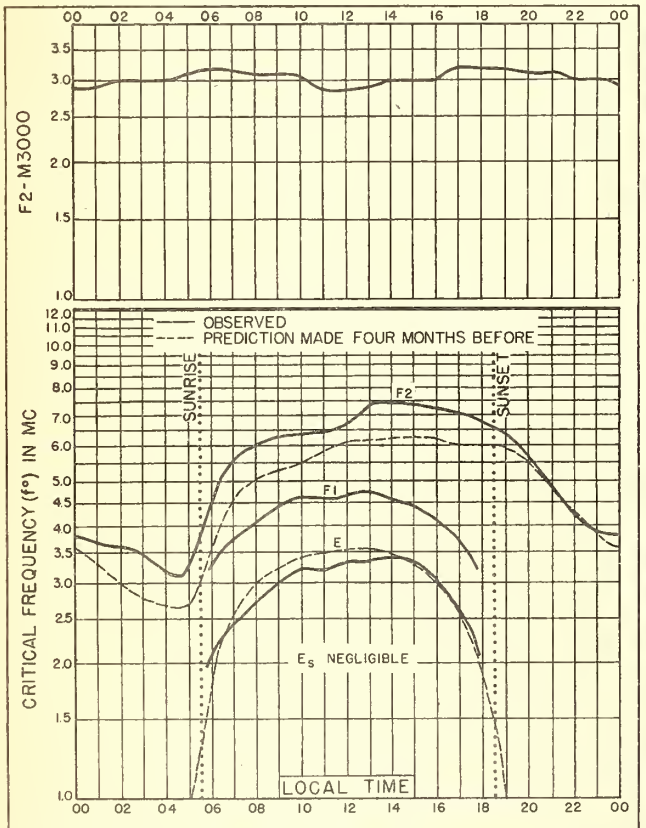

Fig. 15. BATON ROUGE, LOUISIANA
30.5° N, 91.2° W AUGUST, 1945

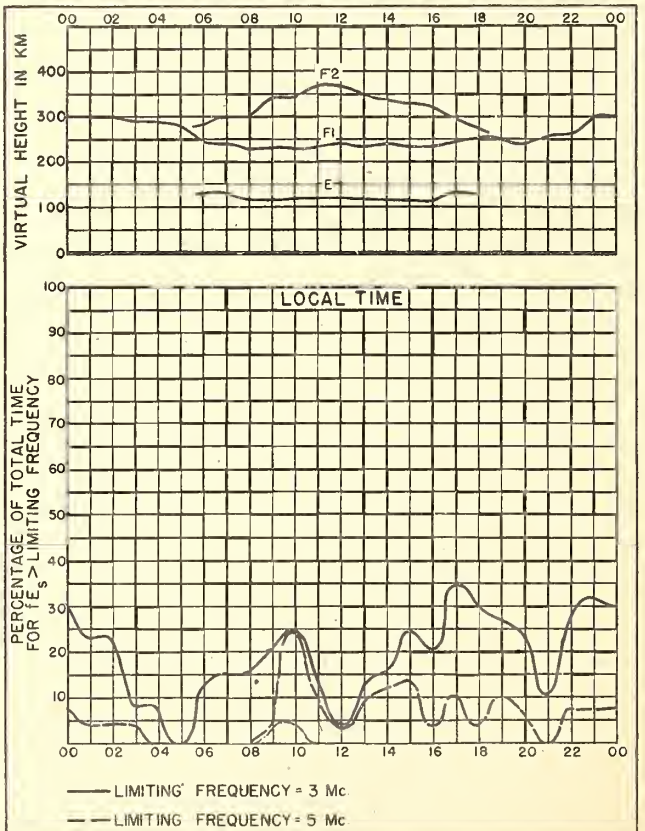

Fig. 16. BATON ROUGE, LOUISIANA AUGUST, 1945.

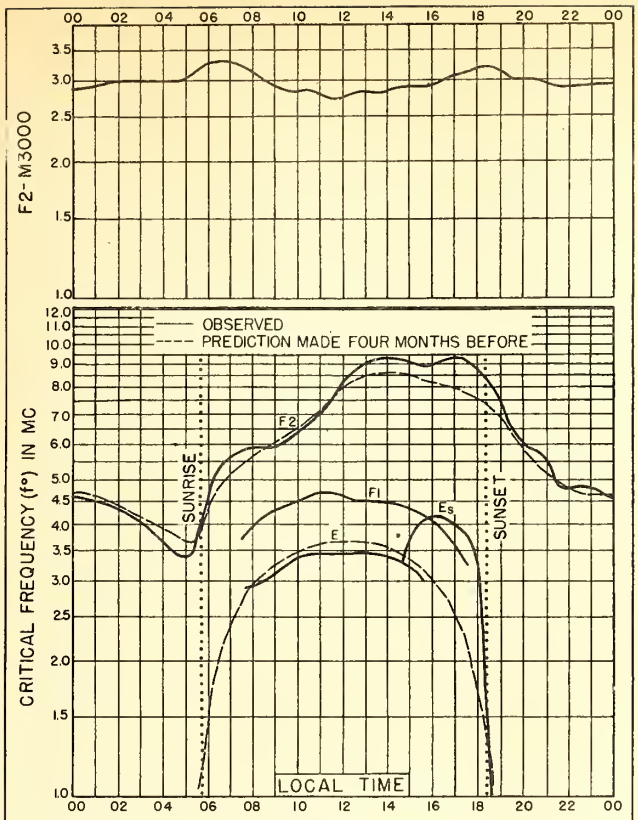

Fig. 17. SAN JUAN, PUERTO RICO
18.4° N, 66.1° W AUGUST, 1945.

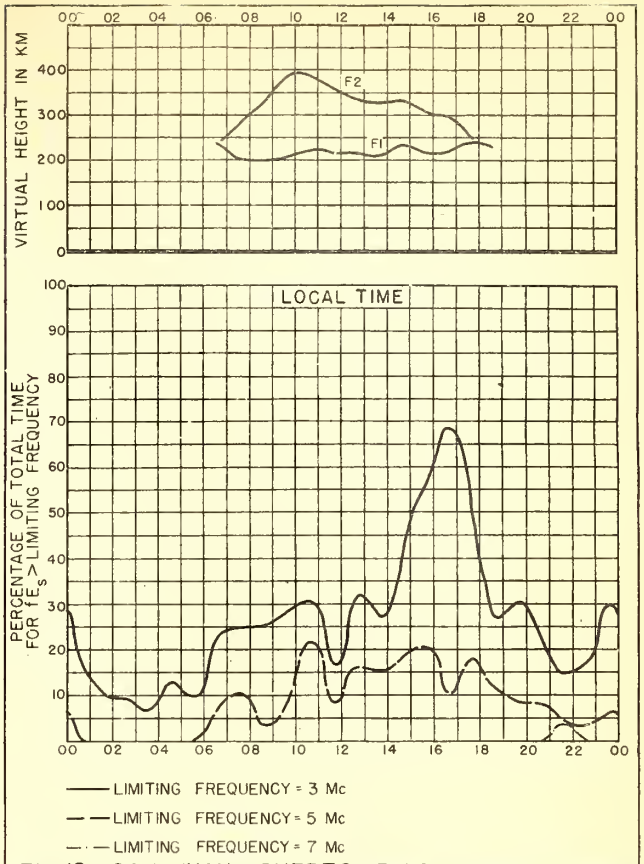

Fig. 18. SAN JUAN, PUERTO RICO AUGUST, 1945.

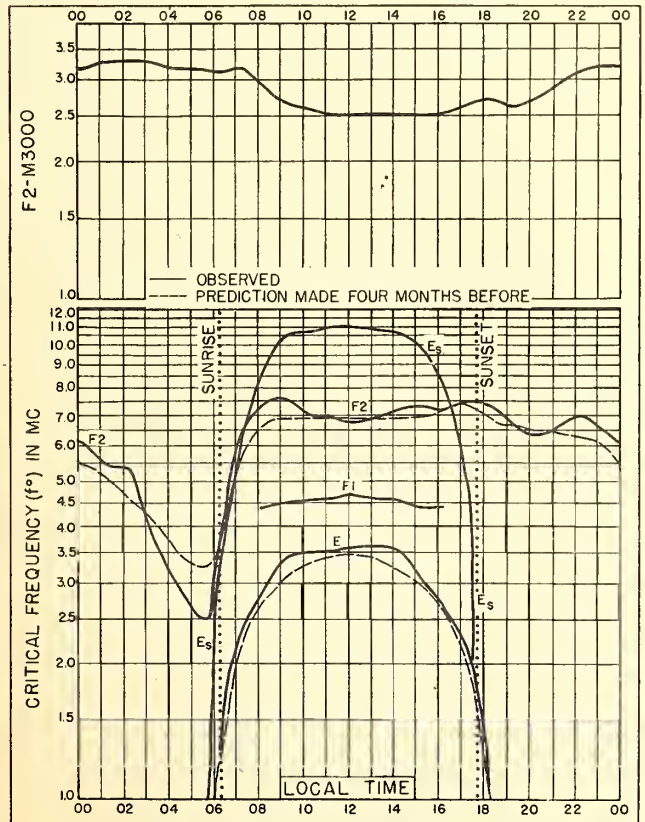

Fig. 19. HUANCAYO, PERU
12.0° S, 75.3° W AUGUST, 1945.

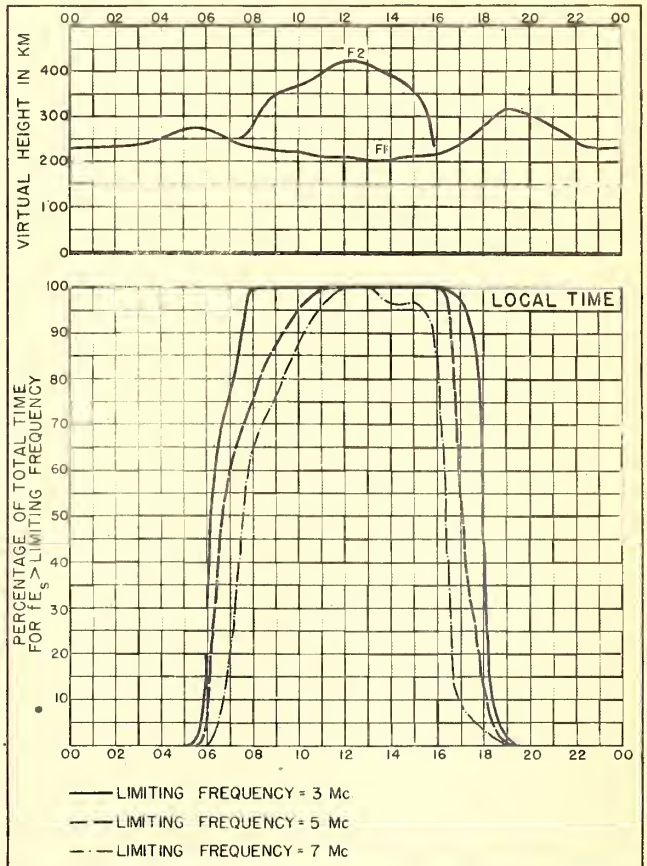

Fig. 20. HUANCAYO, PERU AUGUST, 1945.

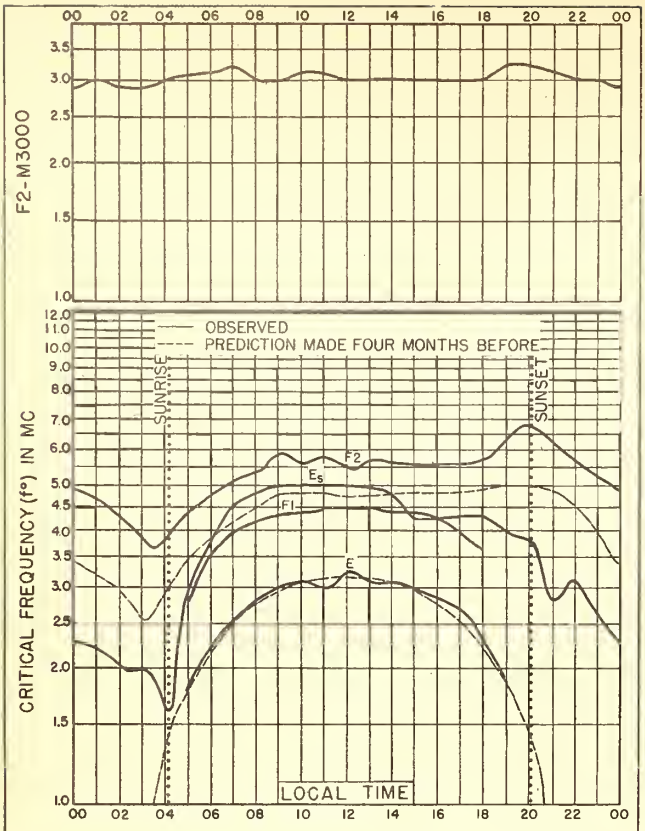

Fig. 21. GREAT BADDOW, ENGLAND
51.7°N, 0.5°E JULY, 1945

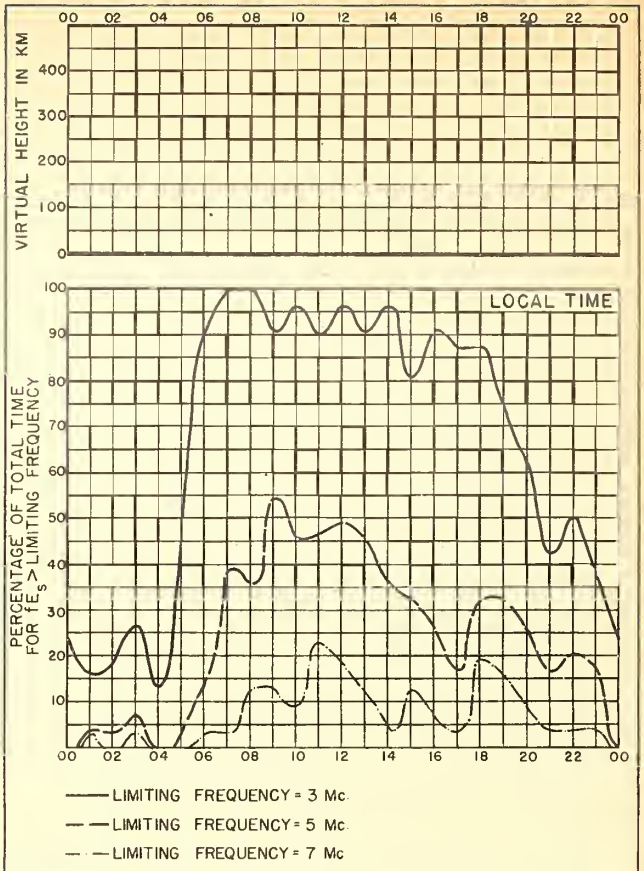

Fig. 22. GREAT BADDOW, ENGLAND JULY, 1945

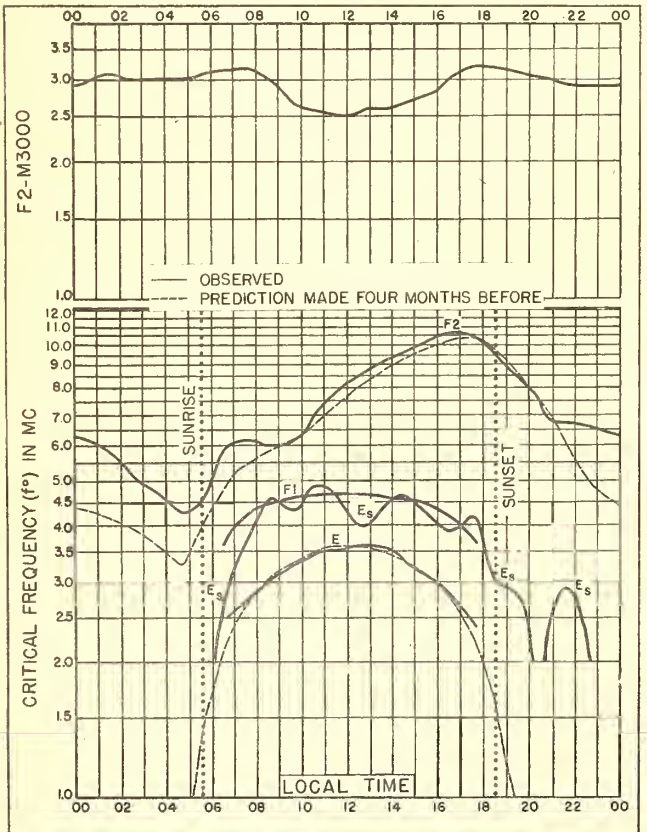

Fig. 23. MAUI, HAWAII
20.8°N, 156.5°W JULY, 1945

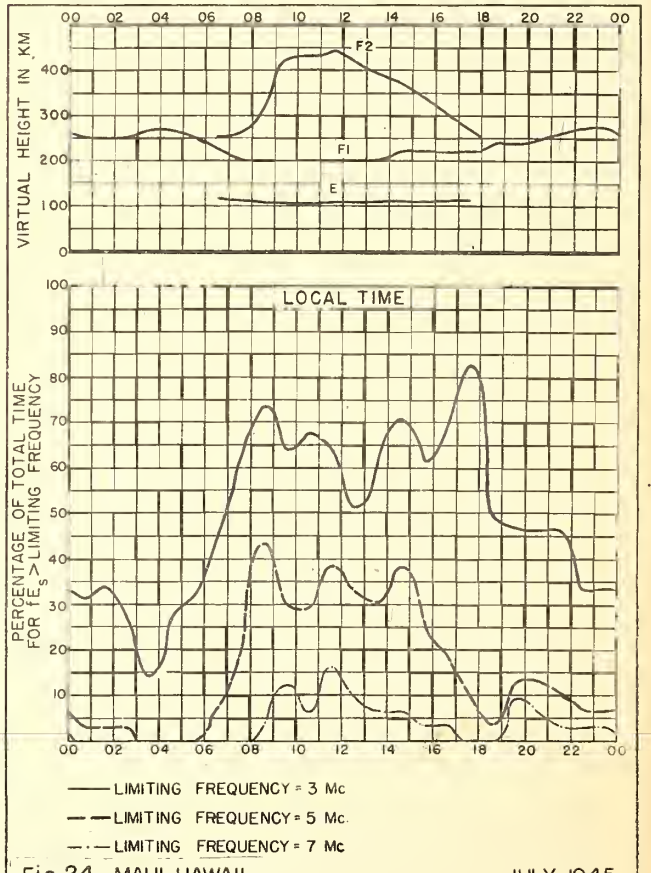

Fig. 24. MAUI, HAWAII JULY, 1945

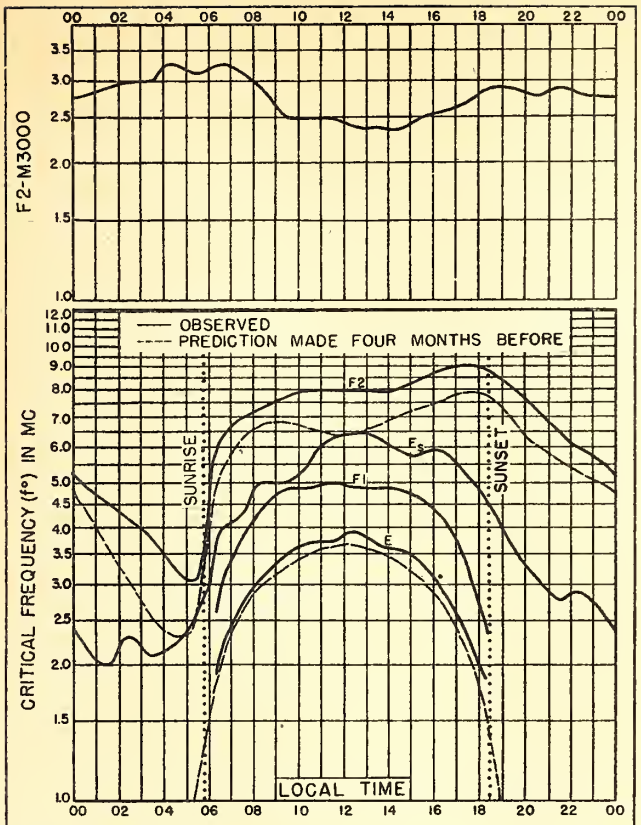

Fig. 25. LEYTE
11.0°N, 125.0°E
JULY, 1945.

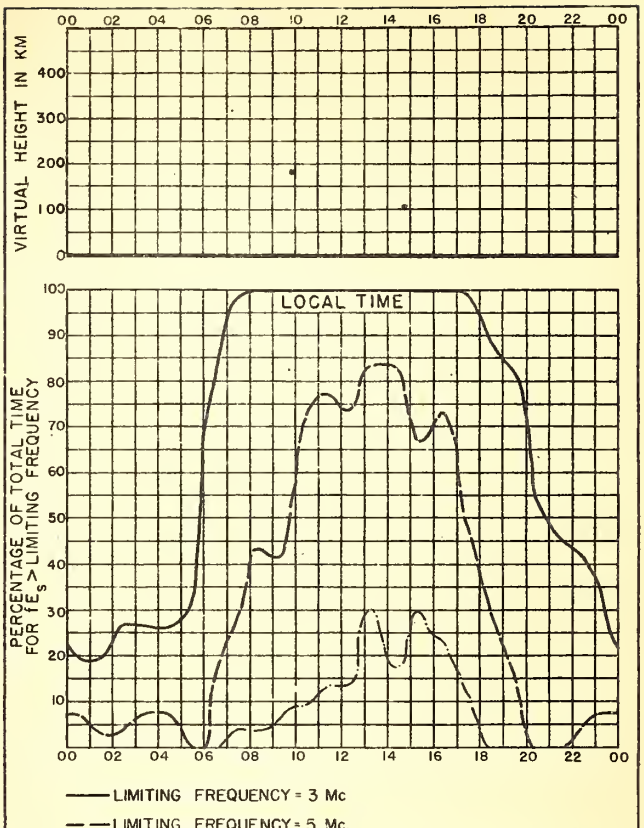

Fig. 26. LEYTE
JULY, 1945.

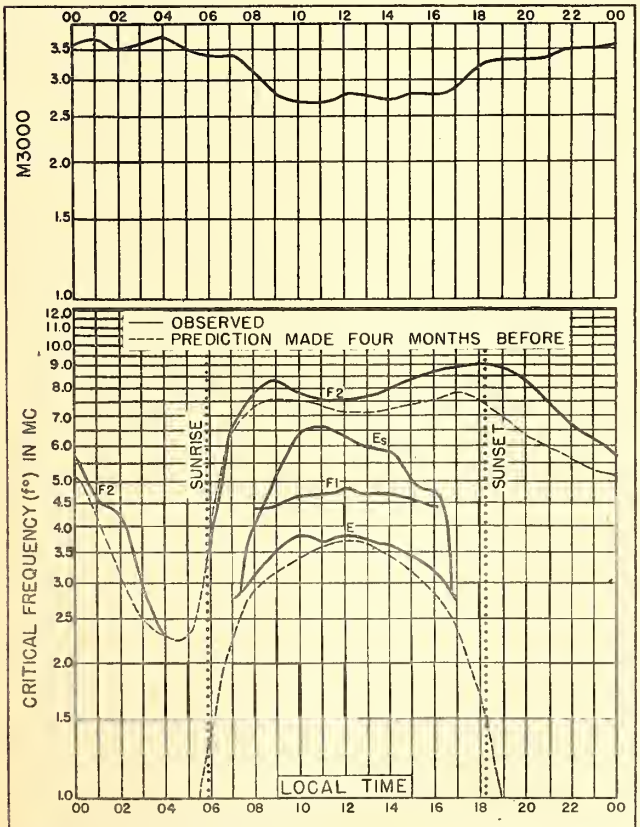

Fig. 27. COLOMBO, CEYLON
6.6°N, 80°E.
JULY, 1945.

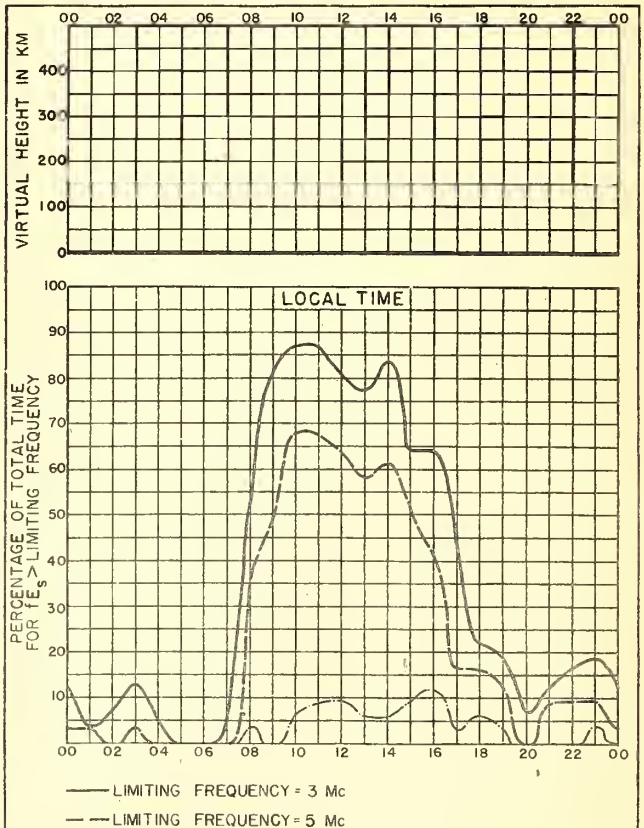

Fig. 28. COLOMBO, CEYLON.
JULY, 1945.

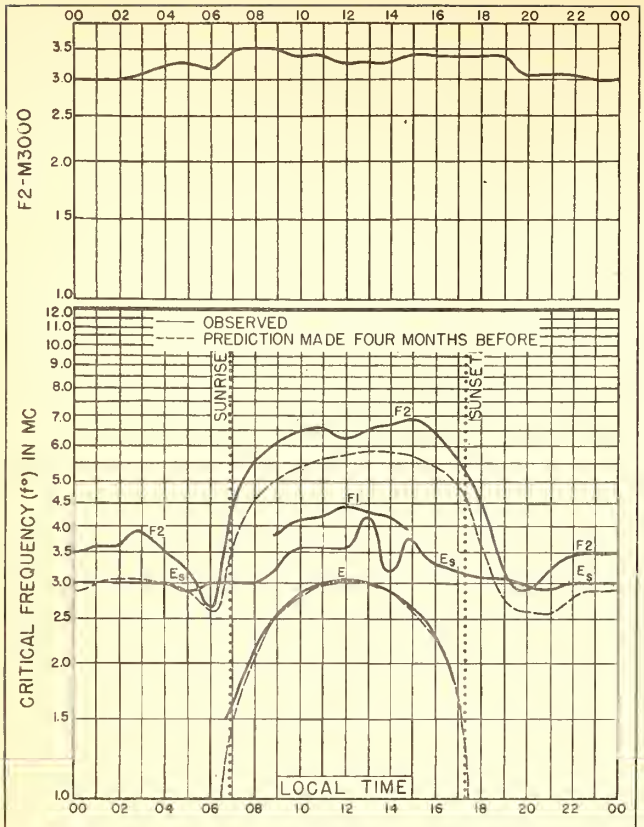

Fig. 29. WATHEROO, W AUSTRALIA
30.3°S, 115.9°E JULY, 1945

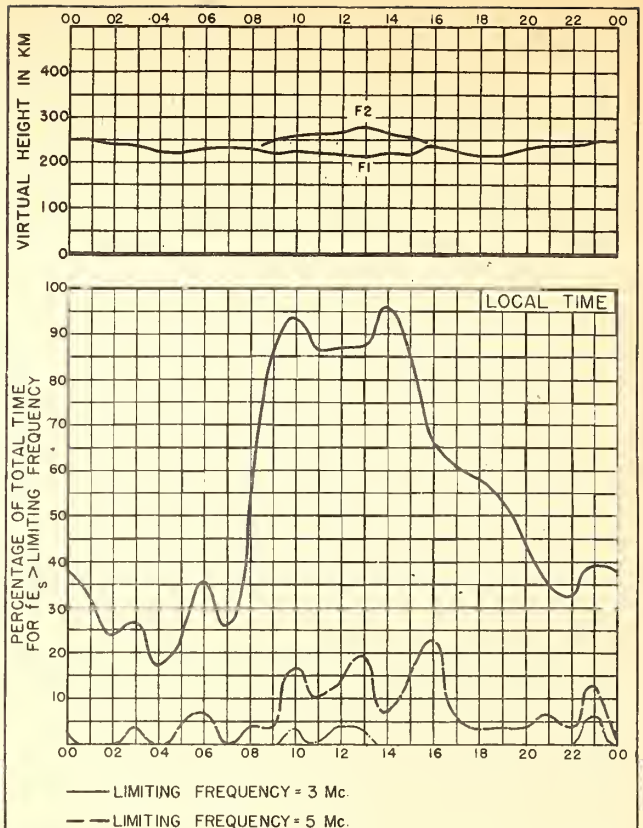

Fig. 30. WATHEROO, W. AUSTRALIA JULY, 1945

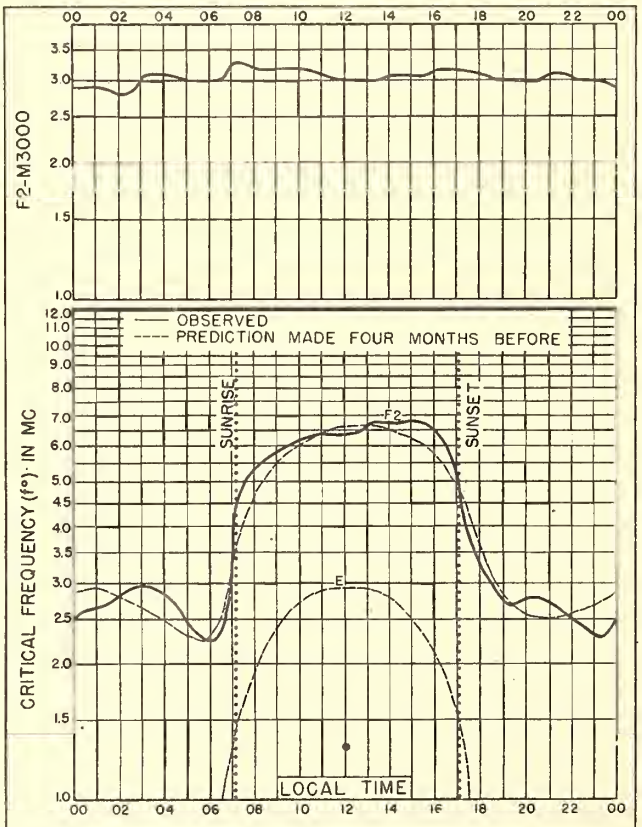

Fig. 31. SIMONSTOWN, UNION OF S. AFRICA
33.9°S, 18.7°E JULY, 1945

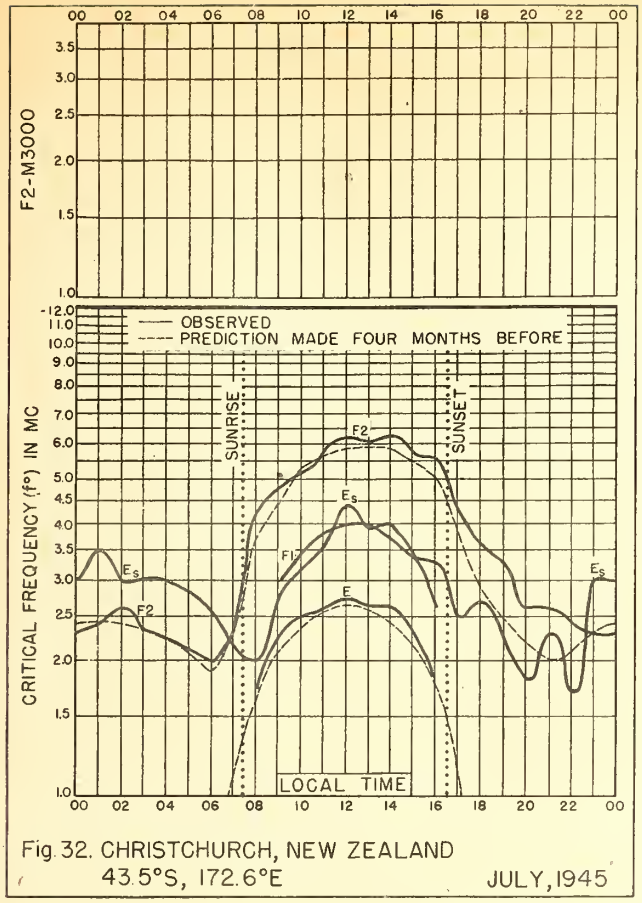

Fig. 32. CHRISTCHURCH, NEW ZEALAND
43.5°S, 172.6°E JULY, 1945

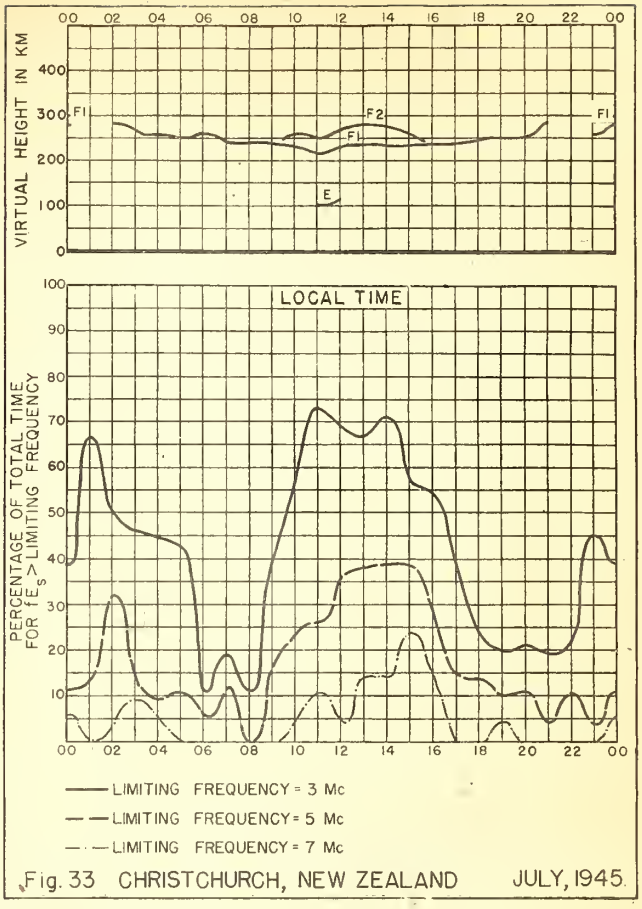

Fig. 33 CHRISTCHURCH, NEW ZEALAND JULY, 1945

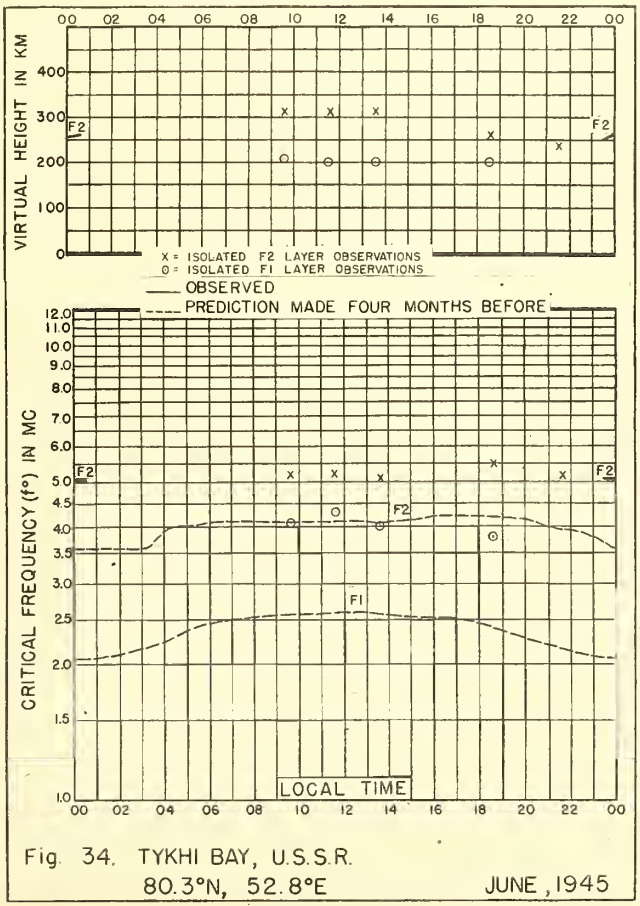

Fig. 34. TYKHI BAY, U.S.S.R.
80.3°N, 52.8°E JUNE, 1945

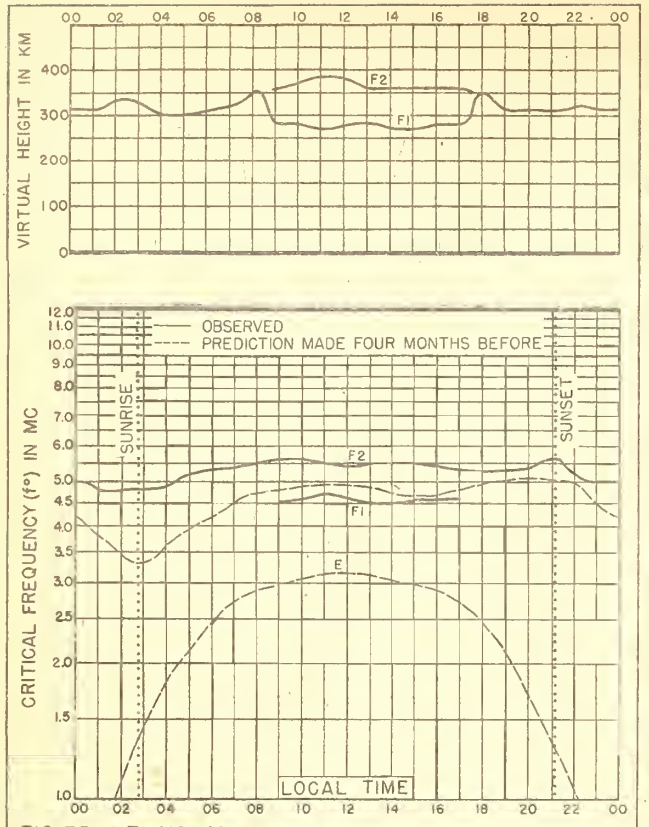

FIG. 35. LENINGRAD, U. S. S. R. JUNE, 1945

59.7° N, 30.5° E

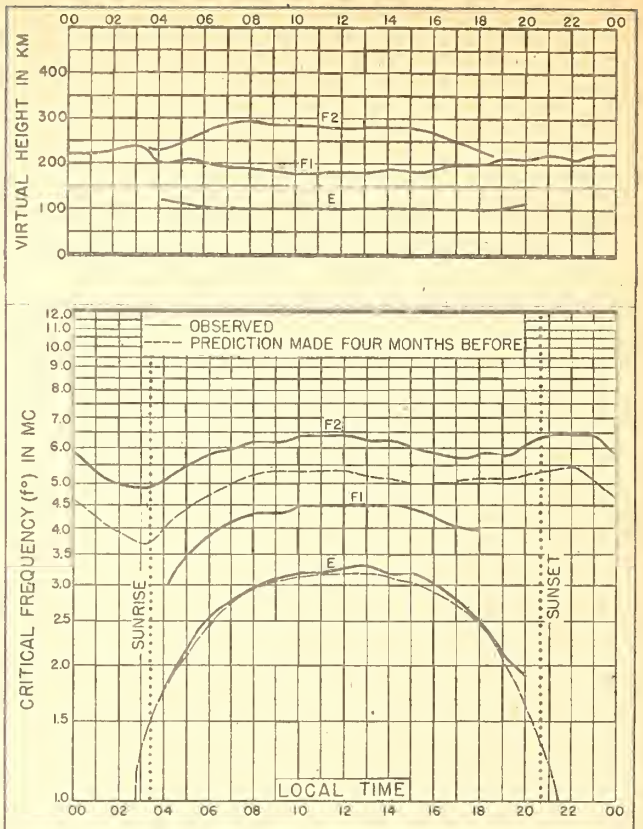

Fig. 36. SVERDLOVSK U.S.S.R.

56.7°N, 61.1°E JUNE, 1945

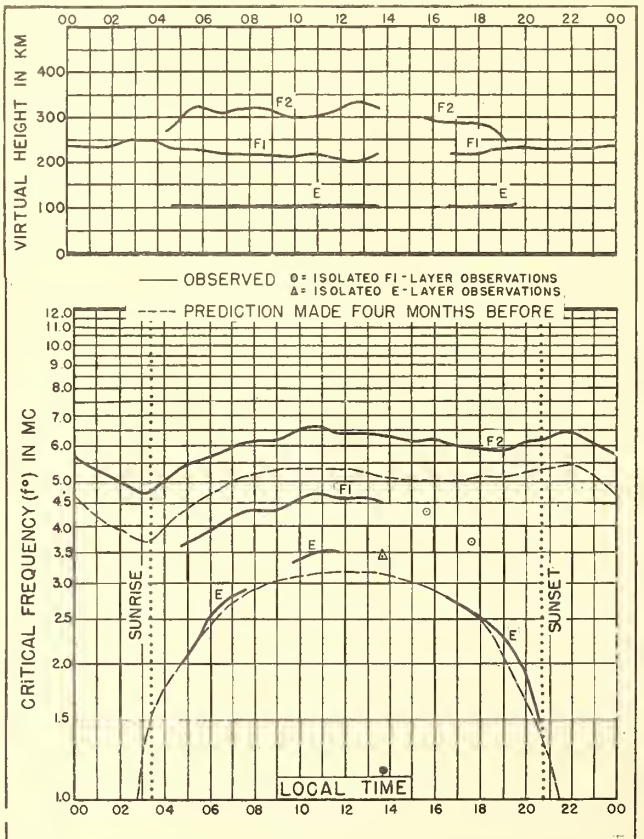

Fig. 37. TOMSK, U.S.S.R.

56.4°N, 85.0°E JUNE, 1945

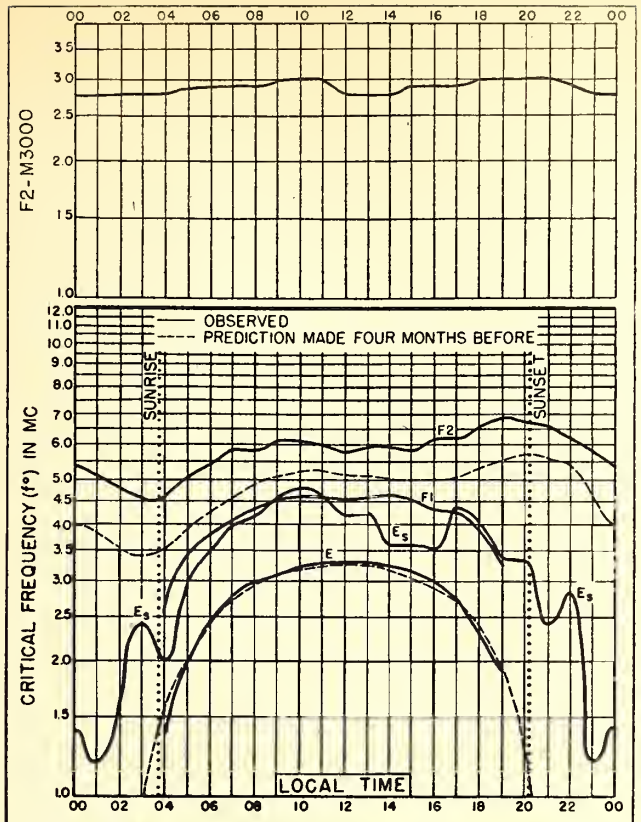

Fig. 38. GREAT BADDOW, ENGLAND
51.7°N, 0.5°E JUNE, 1945

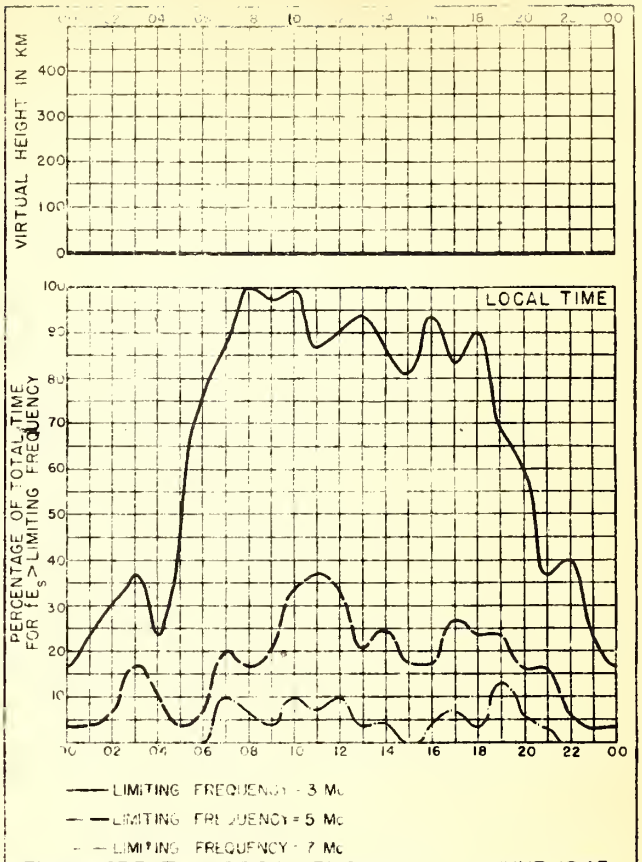

Fig. 39. GREAT BADDOW, ENGLAND JUNE, 1945

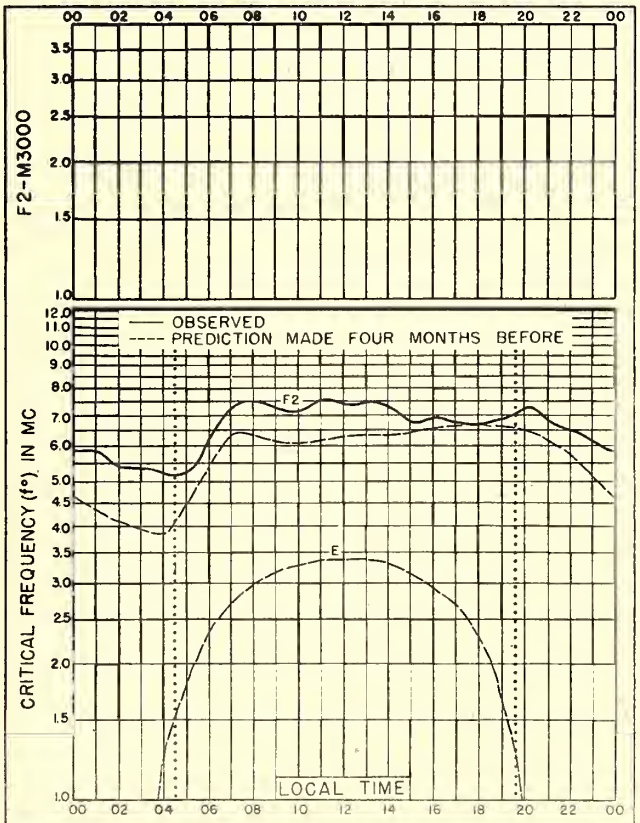

Fig. 40. ALMA ATA, U.S.S.R.
43.5° N, 76.5° E JUNE, 1945

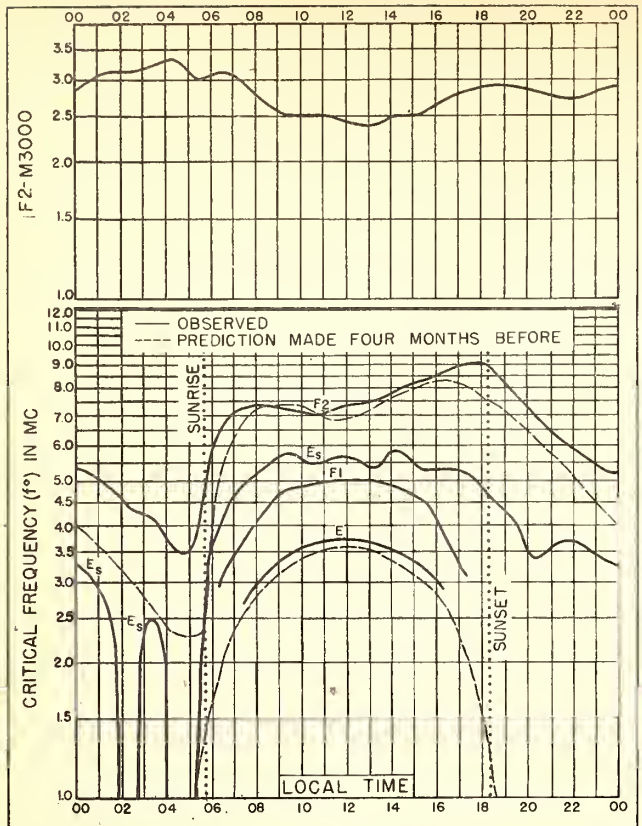

Fig. 41. LEYTE
11.0° N, 125.0° E
JUNE, 1945.

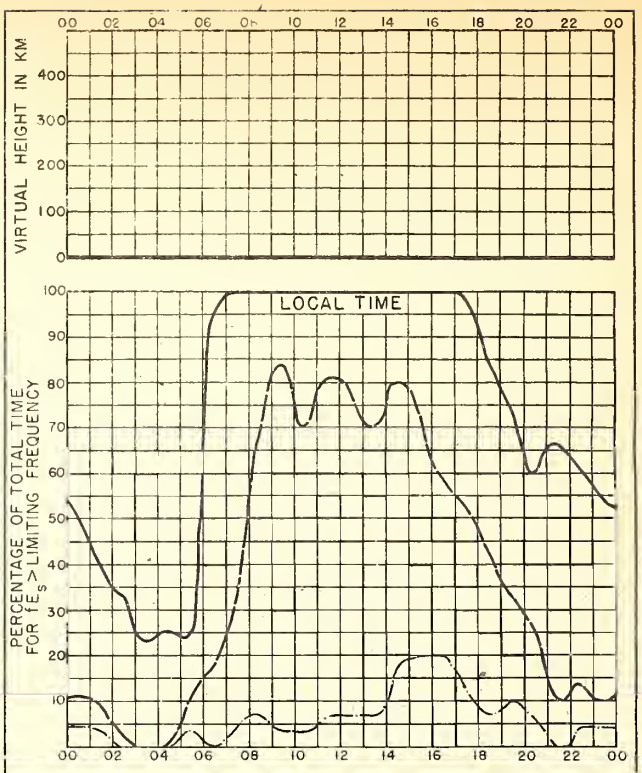

Fig. 42. LEYTE
JUNE, 1945.

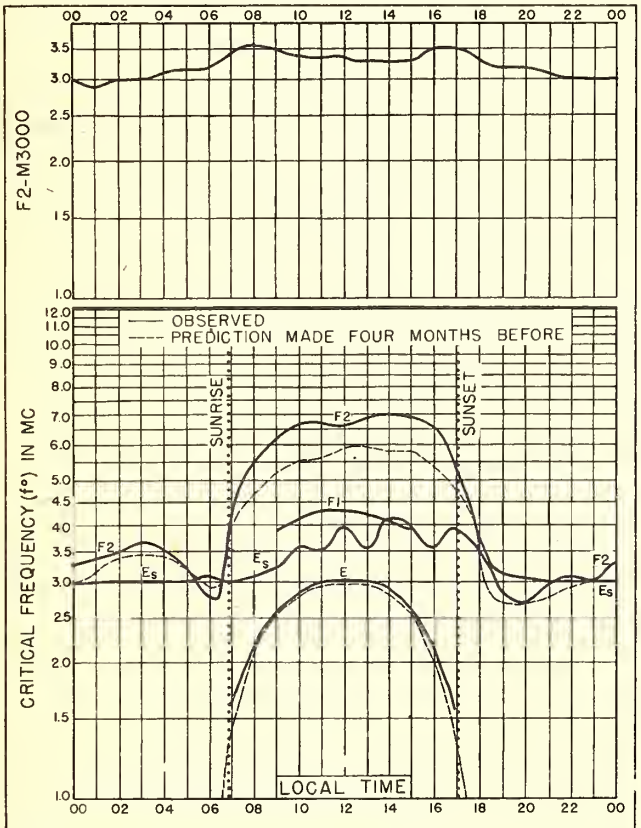

Fig 43. WATHEROO, W. AUSTRALIA
30.3°S, 115.9°E
JUNE, 1945

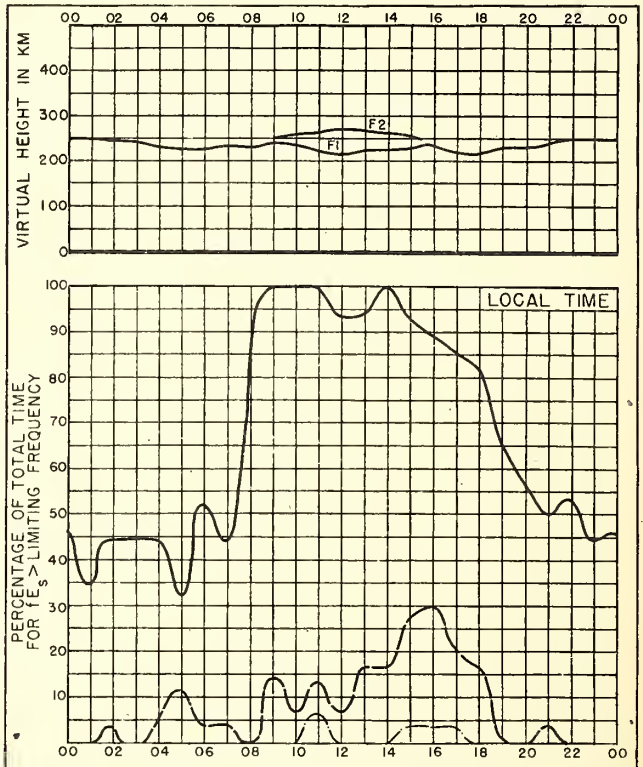

Fig. 44. WATHEROO, W. AUSTRALIA
JUNE, 1945

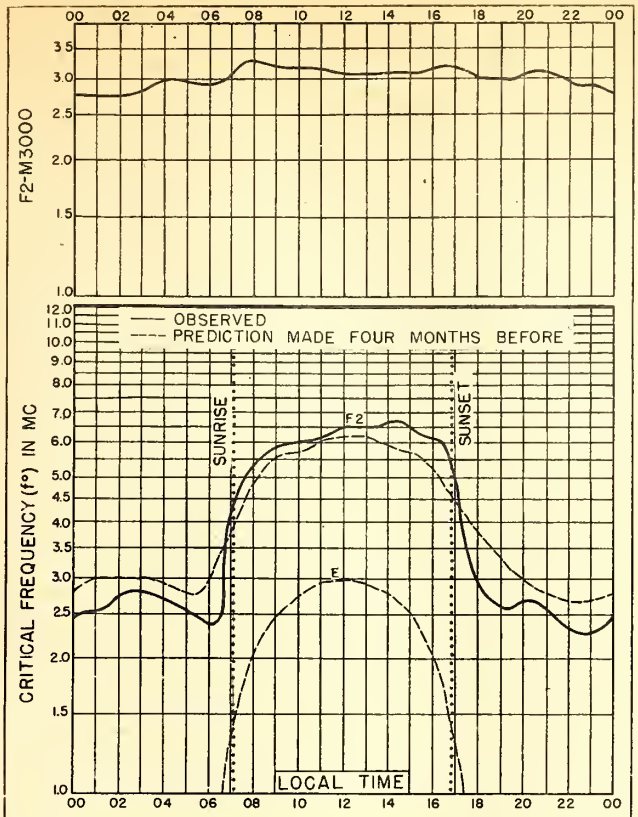

Fig. 45. SIMONSTOWN, UNION OF S. AFRICA
33.9°S, 18.7°E JUNE, 1945

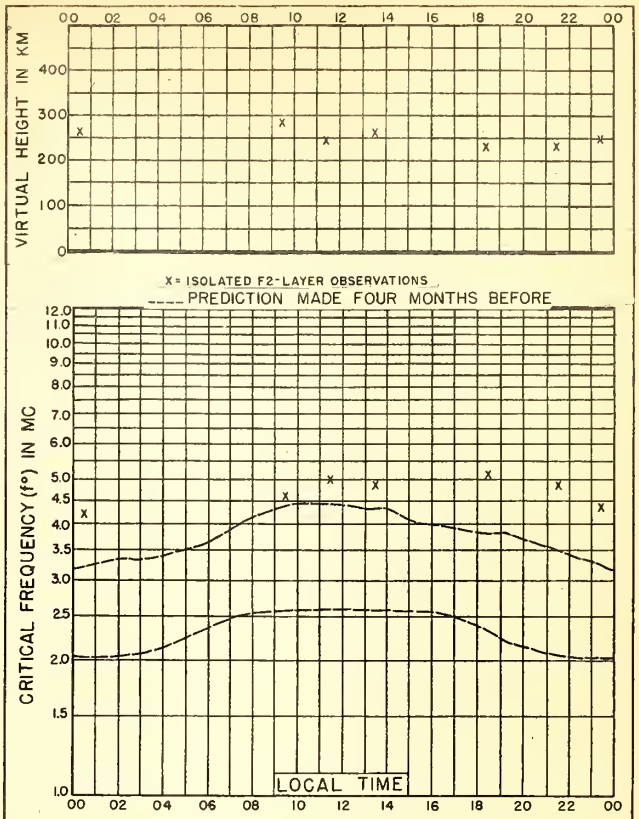

Fig. 46. TYKHI BAY, U.S.S.R.
80.3°N, 52.8°E MAY, 1945

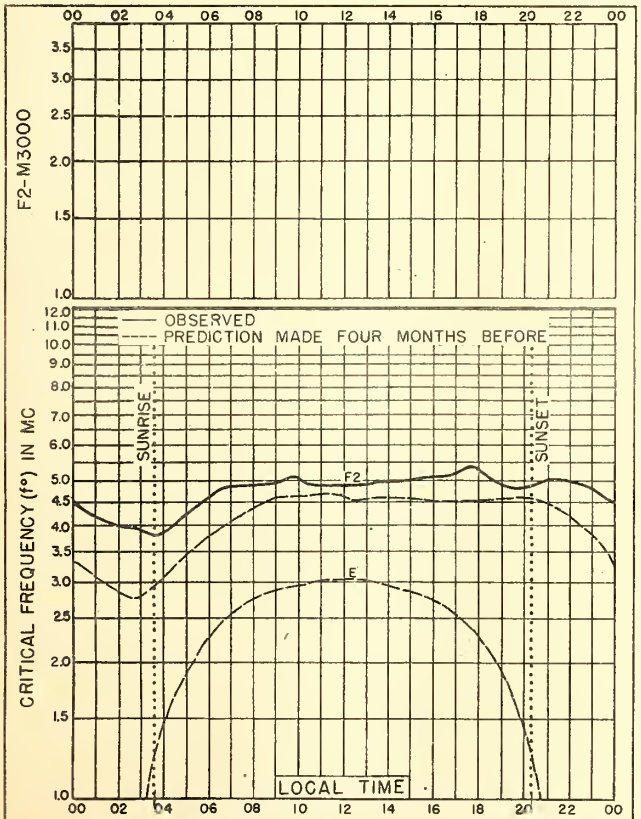

Fig. 47. OSLO-KJELLER
59.9°N, 11.0°E MAY, 1945.

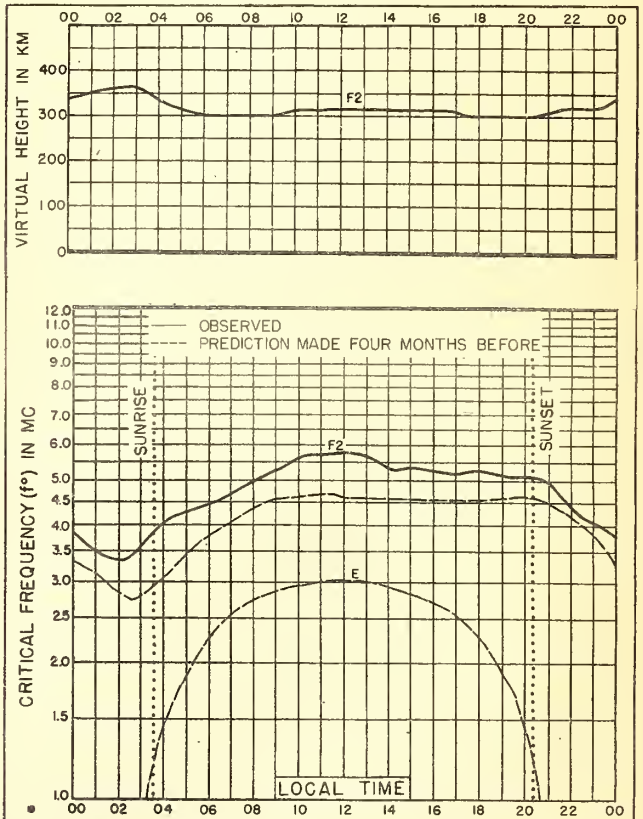

Fig. 48. LENINGRAD, U. S. S. R.
59.7° N, 30.5° E MAY, 1945.

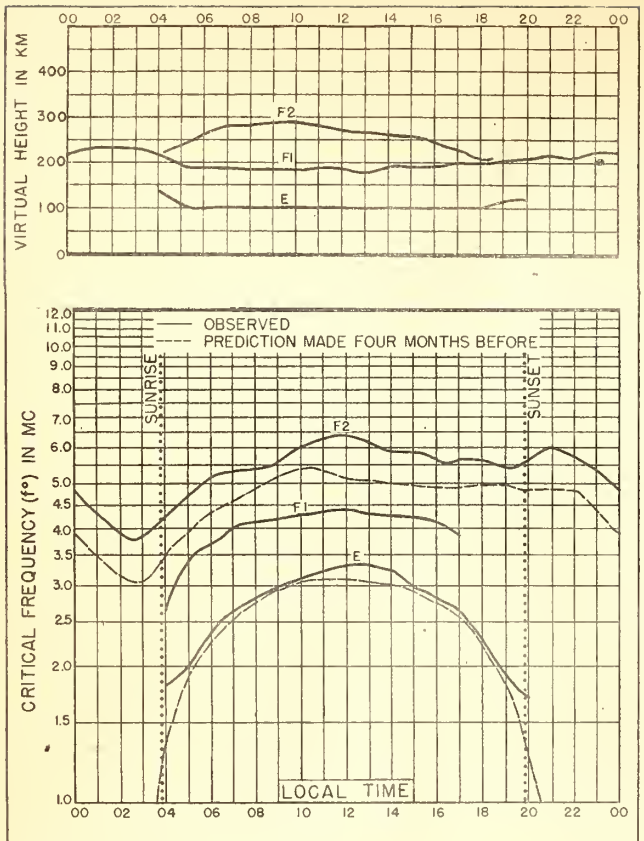

Fig. 49. SVERDLOVSK, U.S.S.R.
56.7°N, 61.1°E
MAY, 1945

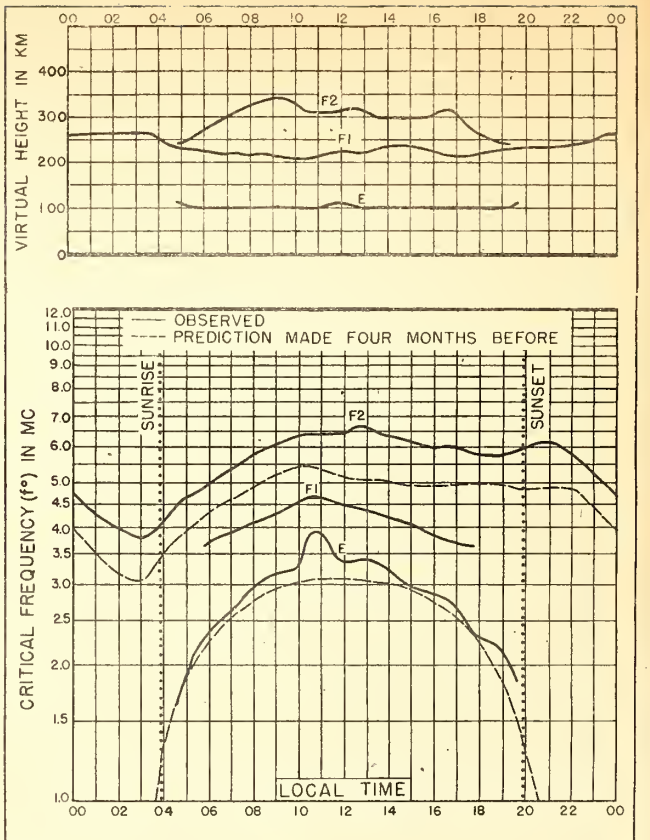

Fig. 50. TOMSK, U.S.S.R.
56.4°N, 85.0°E
MAY, 1945

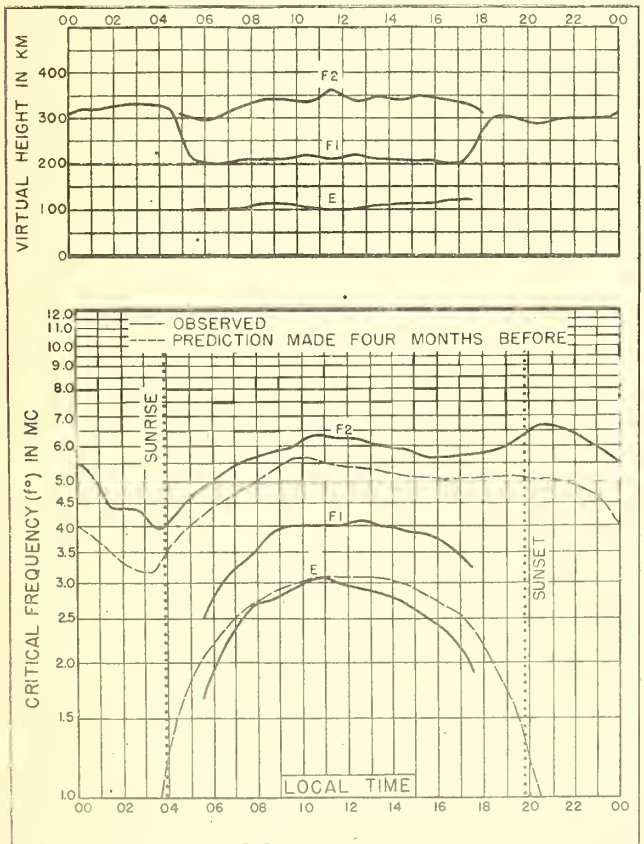

Fig. 51. MOSCOW, U.S.S.R.
55.8°N, 37.6°E
MAY, 1945

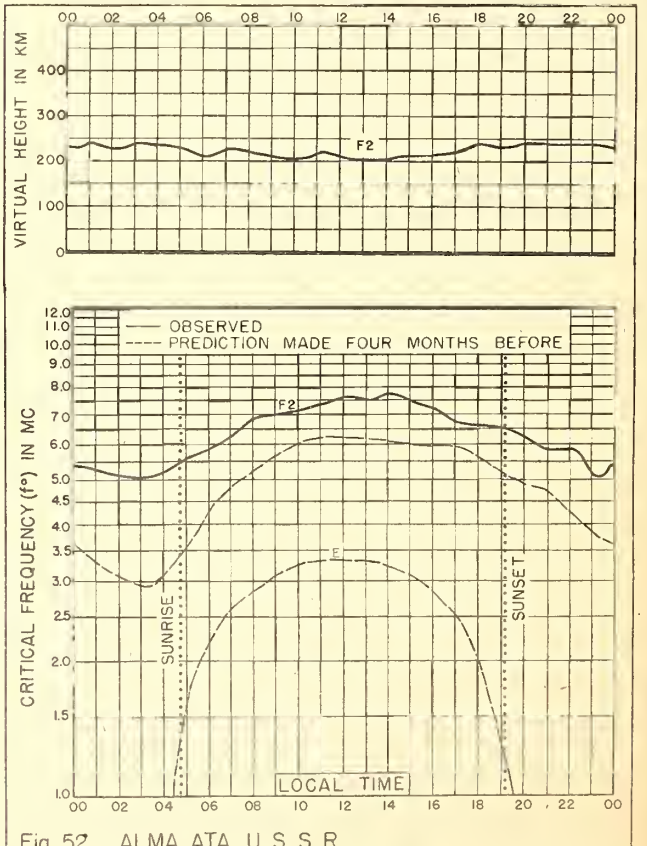

Fig. 52. ALMA ATA, U. S. S. R.
43.5°N, 76.5°E
MAY, 1945.

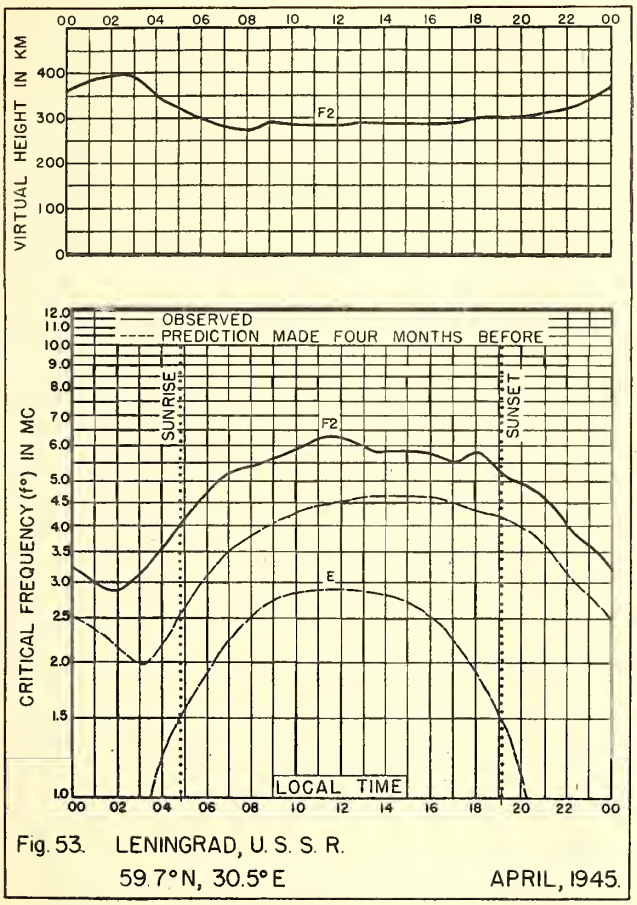

Fig. 53. LENINGRAD, U. S. S. R.
59.7° N, 30.5° E APRIL, 1945.

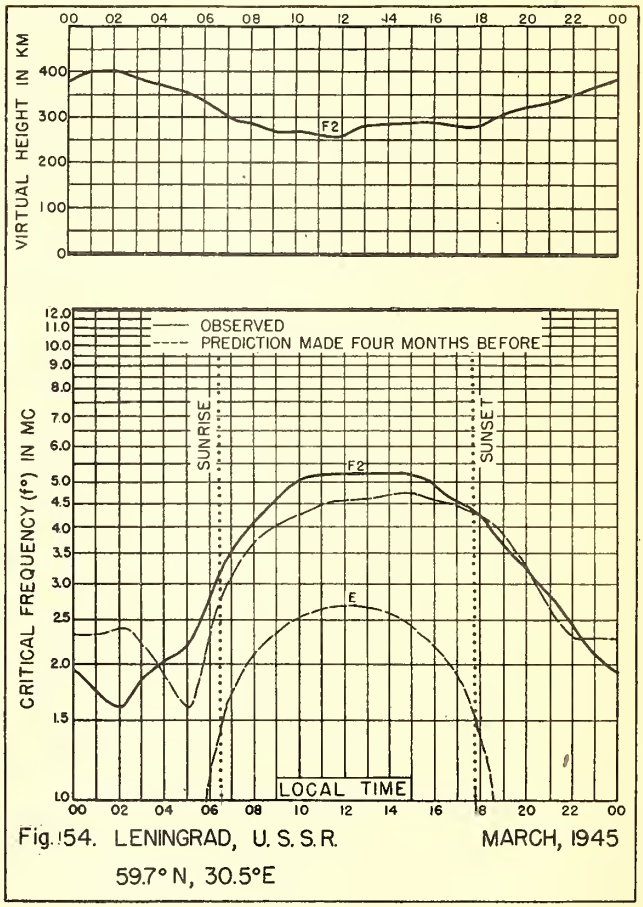

Fig. 54. LENINGRAD, U. S. S. R. MARCH, 1945
59.7° N, 30.5° E

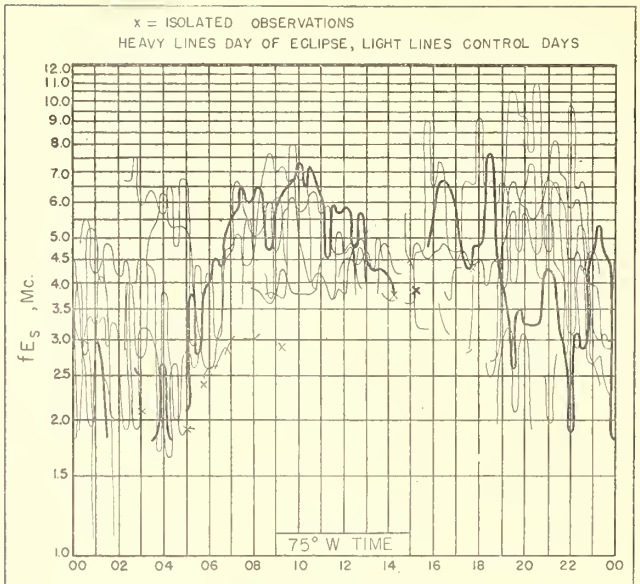

Fig. 55. BOSTON, MASSACHUSETTS.
42.4°N, 71.2°W 6 JULY THROUGH 12 JULY

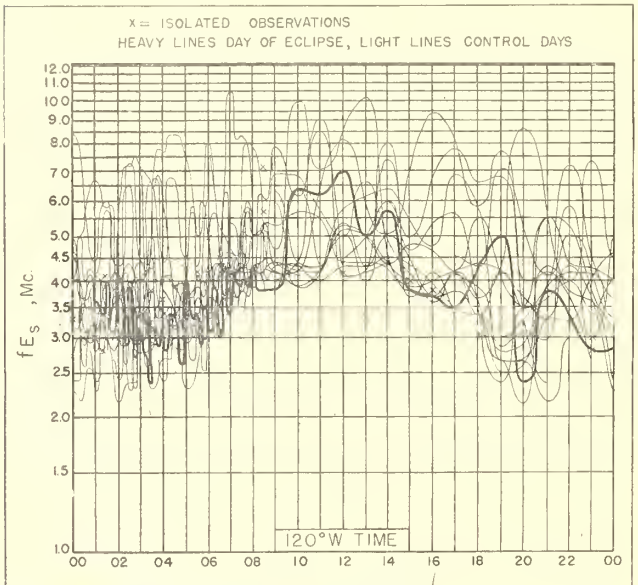

Fig. 56. SAN FRANCISCO, CALIFORNIA.
37.4°N, 122.2°W 2 JULY THROUGH 17 JULY

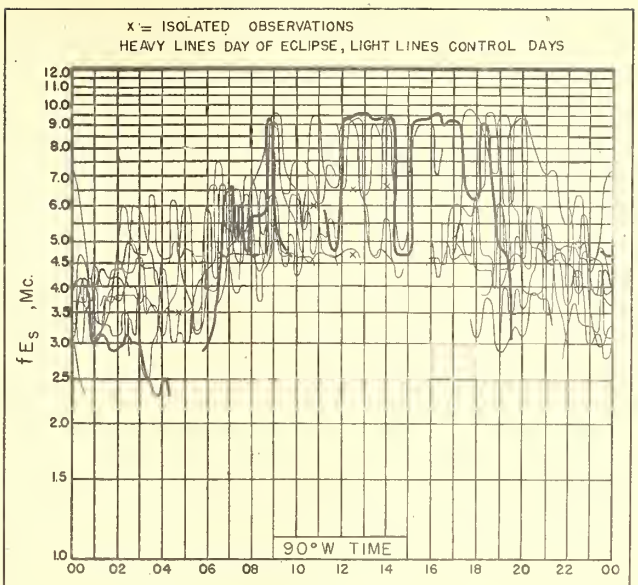

Fig. 57. BATON ROUGE, LOUISIANA.
30.5°N, 91.2°W 4 JULY THROUGH 15 JULY

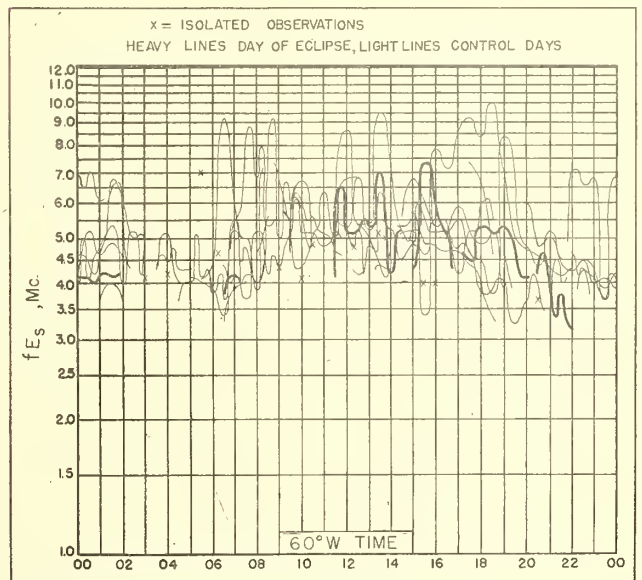

Fig. 58. SAN JUAN, PUERTO RICO.
18.4°N, 66.1°W 6 JULY THROUGH 16 JULY

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- R20. Nomographic Predictions of F2-layer Frequencies Throughout the Solar Cycle, for September.
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